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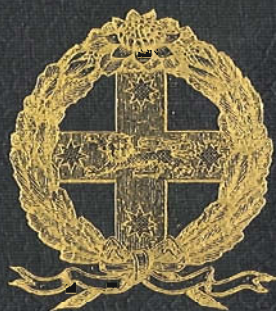
The

Official Year Book

of

New South Wales.

1922.



H. A. SMITH.

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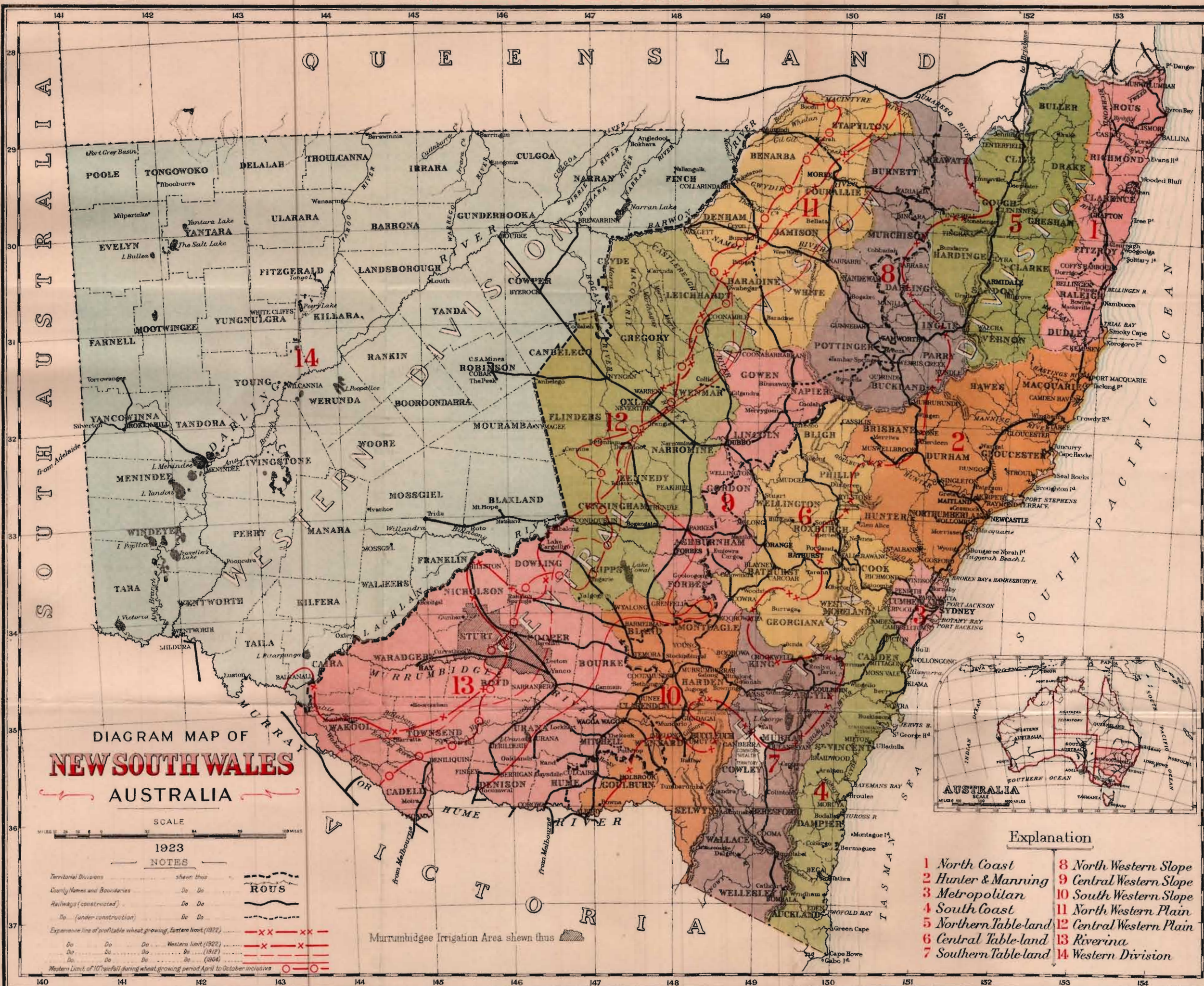
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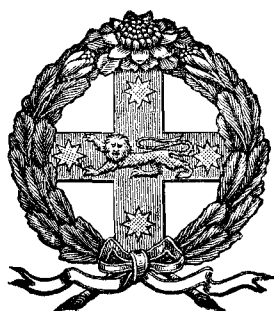








THE  
OFFICIAL YEAR BOOK  
OF  
NEW SOUTH WALES.  
1922.



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H. A. SMITH, F.S.S.,  
GOVERNMENT STATISTICIAN.

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PUBLISHED BY AUTHORITY OF THE GOVERNMENT OF  
NEW SOUTH WALES.

ALFRED JAMES KENT, GOVERNMENT PRINTER.

1924.

[5s.]



## PREFACE.

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THIS is the thirtieth issue of the Official Year Book, which from the first issue in 1886 to 1904 was known as the "Wealth and Progress of New South Wales."

In a work of this kind there is always difficulty in making it interesting to the two classes of persons for whose use it is intended, viz., those within the State, and those abroad, but it is believed the difficulty has been met.

The contents have been published already in fifteen parts, containing information which was the latest available at the date of publication, and they were issued as they became available from the printer, in order to render them of immediate service.

A diagram map of New South Wales is published with the volume to show the railways, county and territorial divisions, and area of the State suitable for the profitable cultivation of wheat.

Every care has been taken to keep the work free from errors, but if any be noticed by readers, I should be pleased to receive information regarding them.

I have to express my thanks to the responsible officers of the various State and Commonwealth Departments, and to others who have kindly supplied information, often at considerable trouble.

The "Statistical Register of New South Wales," published annually from this Bureau, contains in full detail the statistics of the State, and it will prove serviceable to those who desire to obtain additional information regarding the matters treated generally in this Year Book.

H. A. SMITH,  
Government Statistician.

Bureau of Statistics,  
Sydney, 15th December, 1923.

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## GEOGRAPHY.

**NEW SOUTH WALES** is situated entirely in the temperate zone of the Southern Hemisphere, and is on the opposite side of the world from the seat of the British Empire, of which it forms a part. It is distant from London 11,200 miles by the Suez Canal—the shortest shipping route.

The name “New South Wales” was given to the eastern part of Australia (then known as New Holland) on its discovery by Captain Cook in 1770, and for fifty-seven years all Australian territory east of longitude 135° east was known by that name. The western boundary was moved in 1827 to longitude 129°, and New South Wales was made thereby to embrace the whole of Australasia with the exception of the present territory of Western Australia. The steps by which the territory of the State assumed its present boundaries and dimensions were as shown below :—

Date.	Nature of Territorial Adjustment.	Area involved in adjustment.	Area of New South Wales after adjustment.	Population of Territory known as New South Wales at end of year.
		sq. miles.	sq. miles.	
1788	New South Wales defined as whole of Australasia east of longitude 135° east.*	...	1,584,998§	1,024 (26th Jan.).
1825	Tasmania practically separated from New South Wales.	26,215	1,558,783§	33,500†
1827	Western boundary of New South Wales moved to longitude 129° east.	518,134	2,076,917	39,467
1836	South Australia founded as a separate colony.	209,850	1,767,067	77,096 (2nd Sept.)
1841	New Zealand proclaimed a separate colony	104,471	1,662,596	130,856 (2nd Mar.).
1851	Victoria proclaimed a separate colony ...	87,884	1,574,712	178,668 (1st Mar.).
1859	Queensland proclaimed a separate colony ...	554,300	1,020,412	327,500
1861-3	Northern Territory and territory between longitude 129° and 132° east separated.	710,040	310,372	377,712
1911	Federal Capital Territory ceded to Commonwealth.	912	309,460	1,648,746
1915	Territory at Jervis Bay ceded to Commonwealth.	28	309,432	1,895,347

\* Literally interpreted the boundaries defined included Fiji, Samoa, and some neighbouring islands.

† Approximate. § Exclusive of area of Pacific Islands except New Zealand.

### BOUNDARIES AND DIMENSIONS.

The present boundaries of the State are as follow :—On the east, the coastline from Point Danger to Cape Howe; on the west, the 141st meridian of east longitude; on the north, the 29th parallel of south latitude, proceeding east to the Barwon River, and thereafter along the Macintyre and Dumaresq Rivers to the junction with Tenterfield Creek; thence along the crest of a spur of the great Dividing Range, the crest of that range north to the Macpherson Range, and along the crest of the Macpherson Range east to the sea; on the south, the southern bank of the Murray River to its source at the head of the River Indi, and thence by a direct marked line to Cape Howe.

From Point Danger, along a diagonal line, to the south-west corner of the State—a distance of 850 miles—the greatest dimension of the State is found.



The length of coast, measured direct from Point Danger to Cape Howe, is 683 miles, the actual length of seaboard being 907 miles. The greatest breadth, that measured along the 29th parallel latitude, is 756 miles. The shortest dimension, that along the western boundary, is about 340 miles.

#### AREA.

The total area of New South Wales, including Lord Howe Island, but excluding the Federal Territory, is 309,432 square miles, or 198,036,480 acres, being rather more than one-tenth of the area of the Commonwealth of Australia. About 4,639 square miles, or 2,969,080 acres, of the total surface is covered by rivers and lakes, and 176 square miles, or 112,750 acres, by the principal harbours. The area of Lord Howe Island is 5 square miles.

The area of New South Wales in relation to the total area of the Commonwealth is shown in the following statement :—

State or Territory.	Area.	Per cent. of total Area.
	sq. miles.	
New South Wales ... ..	309,432	10·40
Victoria ... ..	87,884	2·96
Queensland ... ..	670,500	22·54
South Australia ... ..	380,070	12·78
Western Australia ... ..	975,920	32·81
Tasmania ... ..	26,215	·88
Northern Territory ... ..	523,620	17·60
Federal Capital Territory ... ..	912	·03
Federal Territory at Jervis Bay ... ..	28	·00
Commonwealth ... ..	2,974,581	100·00

New South Wales is approximately three and a half times as large as Victoria, nearly twelve times as large as Tasmania, and somewhat smaller than South Australia; Queensland is about twice and Western Australia three times as large as New South Wales.

The following table shows the extent of the State of New South Wales and of the Commonwealth of Australia in comparison with the total area of all countries of the world, the British Empire, and certain individual countries :—

Country.	Area in square miles.	Ratio of Area to Area of New South Wales.	Ratio of Area to Area of Commonwealth.
United Kingdom ... ..	121,633	·393	·041
United States ... ..	2,973,890	9·618	1·000
Canada ... ..	3,729,665	12·053	1·254
Argentina ... ..	1,153,119	3·729	·388
British Empire ... ..	13,257,584	42·845	4·456
The World ... ..	52,055,879	168·231	17·500

#### Lord Howe Island.

Lord Howe Island is a dependency of New South Wales, and is included in the electorate of Sydney; it is situated about 300 miles east of Port Macquarie, and 436 miles north-east of Sydney. The island was discovered in 1788; it is of volcanic origin, and Mount Gower, the highest point, reaches an altitude of 2,840 feet. The climate and soil are favourable to the growth of subtropical products; but on account of the rocky formation of the greater

part of the surface of 3,220 acres, only about 300 acres are arable. The land has not been alienated, but is occupied rent free on sufferance, and is utilised mainly for the production of *Kentia* palm seed. A Board of Control at Sydney manages the affairs of the island and supervises the palm seed industry. At the Census of 1921 the population numbered 111 persons.

#### PHYSICAL FEATURES.

##### *Coastline.*

The coastline of New South Wales is remarkably regular, trending almost uniformly from north-north-east to south-south-west and displaying few striking topographical features. It consists of rugged cliffs, alternating with sandy beaches and numerous inlets, with here and there a river estuary. There are no islands of importance, no noteworthy promontories, and an entire absence of projecting river deltas. The central portion of the coast, however, is well furnished with spacious inlets, distinguished by winding foreshores and ample roadsteads, so that within a space of 150 miles there are as many as five natural harbours of note, some of which rank among the finest in the world, and only await economic development. Port Stephens, the most northerly, lies a little to the north of the central point of the coast; it possesses a great expanse of water exceeding 30 feet in depth. Broken Bay is a submerged river valley, with three arms and spacious anchorage, at the mouth of the Hawkesbury River. Port Jackson (Sydney Harbour), perhaps the finest harbour in the world, is the commercial centre of the State, and an important shipping port with a large volume of trade. Botany Bay is marred by shoals and the absence of high protecting foreshores; but it is spacious, and has an easily navigable entrance. Jervis Bay possesses deep water throughout its great extent, and is at present a naval base and destined to be the port of the Federal Capital at Canberra, with which it will be connected by rail. Further south, Twofold Bay, near the southern boundary, is a potential harbour with a convenient entrance and spacious waterways. The coastal formation of Port Kembla and the estuary of the Hunter River (Port Hunter) have been converted, by considerable expenditure, into serviceable harbours for growing manufacturing centres. At frequent intervals along the coast numerous inlets provide shelter and facilities for coastal shipping.\*

The operations of important physiographical factors have prevented the coast from acquiring features such as projecting deltas and wide river valleys and estuaries, which so commonly give natural access to the interior of other countries. These factors are the close proximity of the watershed to the coast, with consequent shortness and weakness of the rivers, and the presence of a constant though slow-moving southerly ocean current, which sweeps along the coast and prevents the formation of deltas beyond the line of protection afforded by headlands. In a number of instances the volume of the coastal rivers is not great enough to carry their silt far to sea, with the result that, where they meet the dead water of the coast at their mouths, matter is deposited, forming a ground-work for "sand-bars," which constitute impediments to navigation even by coastal vessels.

Strwn along the coast at intervals lie eight lakes, partly marine and partly estuarine, connected with the sea by narrow channels, of which some are navigable and some are blocked for extended periods by sand and silt. It is believed that these lakes were formerly coastal valleys at a higher level than they at present occupy, and that they became "drowned" by the sea

\* Particulars of the shipping at each port are shown in Part "Shipping" of the Statistical Register of New South Wales.

when the subsidence occurred which formed the existing harbours and the present coastal levels. Their entrances in most cases are narrow and shallow, and usually blocked by the action of the sea and wind upon the sand.

Most of these lakes are possessed of great beauty, and attract tourists and holiday-makers, while they provide extensive fishing grounds. The largest, Lake Macquarie, 8 miles south of Newcastle, is 44 square miles in area. A chain of beautiful lakes, of which the principal are the Myall and Wallis Lakes, lies between Port Stephens and Cape Hawke.

### *The Surface.*

The story, as told by geologists, of the manner in which the surface of New South Wales assumed its present shapes is very interesting.

In past ages a great part of the interior of Australia was occupied by a vast mediterranean sea, bounded by a line of highlands, which probably extended considerably to the east of the present coastline. The slope of these was towards the west, and rivers flowed down from them into the inland sea, carrying thither the sand and silt which now seals down the artesian basin. In a later age a gradual uplift took place in the northern part of Australia, accompanied by a depression in the southern portion; and streams which formerly flowed north-west and entered the sea by separate mouths became diverted to the south and conjoined with the Darling River.

The southern depression allowed the sea to encroach inland from the south and to spread over the region now known as the Riverina, but a subsequent uplift pushed the southern sea back to its present boundary and produced a combination of the western rivers into the one great system of Australia—the Murray-Darling.

During the upward movement in the interior a marked elevation took place in the coastal portion, the uplift being greater towards the coast, and an elevated plateau with a short steep slope to the eastern seaboard was produced. Rivers which then commenced to flow down this slope evidently possessed great erosive power, and, by a very gradual process of denudation, worked their way inland extending the coastal district into what were formerly the eastern portions of the Great Dividing Range.

Subsequently a submergence of the coast took place and the valleys of the coastal rivers were converted into harbours, such as Port Jackson, Broken Bay, and Port Stephens.

To-day the surface of New South Wales bears signs of having passed through lengthy periods of erosion. It possesses less diversity than any of the continents, and there are no lofty mountain ranges, few peaks of importance, and no large lakes of permanent water. Nearly the whole of the State consists of extensive plains and hilly patches at varying levels. Yet the surface is divided naturally into four main divisions—the Coast District, the Tablelands, the Western Slopes, and the extensive Plains. The tablelands form the Great Dividing Range, which traverses the State from north to south, and marks the division between the coast district and the plains.

The coastal strip is undulating and well watered. The average width is about 50 miles in the north and 20 miles in the south; at Clifton the tableland abuts on the ocean, while the widest part (150 miles) is in the valley of the Hunter River, where the relatively soft rocks of the coal basin have offered least obstruction to river erosion.

The coastal region is bounded on the west by steep, often inaccessible, escarpments, where the highlands rise suddenly from the lower levels of



the coast; these declivities are furrowed by deep and rugged valleys sloping toward the sea, and here and there a mountain spur projects eastward. These natural features render the country in these districts almost impassable from north to south, and in many places they have made access to the tablelands from the coast a matter of formidable difficulty, so that the highlands are crossed at only three points by the railway and at but few more by roads.

The coast line is fringed with a narrow and fertile plain extending from north to south and broken only at Clifton. This plain juts along the Hunter Valley for a distance of 60 miles. A considerable strip north and south of the Clarence River is 30 to 40 miles wide, thence south to Port Stephens it is narrow, 10 to 15 miles in width; thereafter it gradually broadens until it is broken at Clifton with a width of 35 miles. The South Coast continuation of this plain is never wider than 15 miles, the average width being about 10 miles.

There are two tablelands—the northern and southern—comprising an extensive plateau region, divided near the middle by the Cassilis or Hunter Gap. Generally they present on the eastern side a steep descent towards the ocean, while on the west they slope gradually towards the plains. They vary in width from 30 to 100 miles. The northern tableland commences in Queensland and terminates on the northern side of the Peel River Valley; its average height is 2,500 feet. The southern tableland extends from the Victorian border, and slopes gradually to the Cudgong and Colo Rivers; its average height is slightly less than the northern tableland, although the Kosciusko Plateau, the most elevated portion of the State, is within its limits.

At various levels gently undulating upland plains occur throughout the tableland division, such as the Dorrigo, which forms the elevated hinterland of the coastal tract around Coff's Harbour; and the Bathurst, Goulburn, Yass, and Monaro Plains on the central and southern tablelands. Notable features of the southern tableland are the limestone belt, in which the famous Jenolan and other limestone caves occur, and the grandeur of the scenery in the numerous sunken valleys, such as those of the Blue Mountains, the Burragorang Valley, through which the Wollondilly River flows, the Kangaroo Valley, between Moss Vale and the Shoalhaven River, and the Araluen Valley further south.

The Great Plain district covers nearly two-thirds of the area of New South Wales. It stretches from the base of the slopes of the tablelands to the western boundary of the State, and thence north, south, and west as the Great Central Plain of Australia. The plains are not quite level, but rise very gently from the bed of the Darling eastward towards the Great Dividing Range and westward towards the South Australian border. Only a few trifling elevations occur, but in the centre the Cobar plain, 150 miles wide, stretches for 300 miles in a north-westerly direction toward the Darling River, its altitude ranging from 500 feet to 1,000 feet above sea level. Owing to their scanty rainfall the plains are devoid of forests.

The plains are watered by the rivers of the Murray-Darling system; the Darling and its tributaries are liable to considerable shrinkage in periods of dry weather; but, on the other hand, in wet seasons, these streams overflow their banks and flood the surrounding country for miles, producing a luxuriant growth of grasses.

The surface of the plains consists of fertile red and black soils, the former being particularly rich in plant food. The black soil formations represent the silted-up channels of old rivers which, when flooded, spread a fertile

silt over the surrounding district. The black soil plains occupy large areas along the middle courses of the Macquarie, Castlereagh, Namoi, and Gwydir Rivers.

Several portions of the plains are distinguished by special names, such as the Liverpool Plains, between the Peel and Liverpool Ranges; the Riverina, stretching northward from the Murray and intersected by a network of streams; the Bulloo Plain, between the Paroo River and the Grey and Barrier Ranges; the Bland, between Cootamundra and Lake Cowal; and the Pilliga Scrub, between Narrabri and Coonabarabran. The name Western Plains is now applied generally to the Western Division as shown on the map in the frontispiece, while the plain country of the Central Land Division is referred to as the Central Plains, the southern portion receiving the special name Riverina.

Particulars relating to the economic condition of settlement in the various divisions of the State are published in Part "Rural Settlement" of this Year Book.

### *Mountains.*

The mountains of New South Wales may be classified in two main groups—the Great Dividing Range, with its coastal spurs, and the ranges of the interior.

The Great Dividing Range is the name given to a continuous chain of highlands stretching along the whole eastern portion of Australia. In a strict acceptance of the term the portion within New South Wales is not a range of mountains, but a succession of extensive plateaux. Except for a westerly bend skirting the valley of the Hunter River, it runs for the most part parallel to the coast-line, and a number of lateral spurs branch off from either side.

Proceeding from north to south, the names distinguishing the various portions of the Great Dividing Range in New South Wales are:—Macpherson, New England, Liverpool, Main or Blue Mountain, Cullarin, Gourock, Monaro, and the Murrumbidgee Ranges.

The Northern Tableland, comprising principally the highlands known as the New England Range, is the largest positive physical feature of the State. It has a considerable area at a greater altitude than 4,000 feet, and its highest point, Ben Lomond, is 5,000 feet above sea level. The highest parts of the Great Dividing Range are situated in the extreme south and are known as the Murrumbidgee Range. Several peaks attain an altitude of about 7,000 feet, the highest of all being Mount Kosciusko (7,328 feet).

The remaining mountains of the State, representing the remnants of ancient ranges, possess little importance.

The Warrumbungle Range is practically a continuation of the Liverpool, extending in a north-westerly direction for a distance of nearly 100 miles. These mountains represent the denuded stumps of a series of volcanoes, which burst into activity near the shores of the old inland sea before it became silted up. The sandstone beds of the Warrumbungle Range form part of the intake beds of the great artesian basin.

Two ranges—the Barrier and Grey—of an average elevation of about 1,500 feet, and rising 800 feet above the surrounding plains, lie near the extreme west and north-west of the State. They form the western boundary of the vast depression through which the Darling River and its tributaries flow. The Barrier Range contains some of the richest silver-lead deposits in the world, and some of its rocks are possibly the oldest in Australia, if not in the world.

*Rivers.*

New South Wales does not possess any great rivers, and for this there are three main causes—the position of the watershed; the absence of lofty peaks, whose snowy caps in melting might feed large streams; and the spasmodic, and unreliable nature of the rainfall in the western interior.

The Great Dividing Range, which constitutes the main watershed, has formed an absolute boundary between two river groups—the eastern or coastal, and the western—which are entirely distinct and possess very dissimilar characteristics.

The coastal rivers flow east into the Pacific Ocean, and, on account of the proximity of the mountains to the ocean, the majority are short, rapid, independent streams; the Hunter (340 miles) and the Hawkesbury (335 miles) by reason of their winding courses are the longest. Generally, the rivers south of Sydney, where the coastal strip narrows considerably, are of less importance than those of the north.

The physical aspects of all the eastern rivers are similar. Their upper courses are amidst broken and mountainous country, and the lower basins consist usually of undulating land with rich alluvial flats; where uncultivated, the land is densely timbered.

There are eight principal coastal rivers and numerous minor streams, many of which are navigable for various distances. Ocean-going vessels may proceed along the Richmond for 65 miles, the Clarence 45 miles, the Macleay and Manning 30 miles, and the Hunter 35 miles. Ocean-going vessels may penetrate the Hawkesbury for 70 miles, but the Shoalhaven is navigable for only 5 miles from its mouth.

The rivers of the western slope belong to the Murray-Darling system. They drain an immense area, including the whole of the western portion of New South Wales, and large portions of Queensland and Victoria, and they discharge into the sea through a single mouth. In consequence of the gradual slope of the plain country, these rivers, unlike the coastal, are long, meandering, and slow in discharge. They wind for the most part through loose absorbent soils in which they have usually cut deep channels which at times are full of heavily-charged, fast-moving water of which they relieve their upper basins after heavy rains. On such occasions these streams are impressive rivers. The Gwydir, Namoi, Castlereagh, Macquarie, and Bogan discharge their water into the Darling, which in turn carries it to the Murray, which receives also the waters of the Lachlan and Murrumbidgee. Normally these western rivers have not a great volume of flow, each being a sluggish, shallow, clear stream flowing at the bottom of a channel as much as 30 feet below the ground level. Sometimes, in dry seasons, the flow ceases and there remains of the river nothing but a chain of water-holes. These curious variations in the condition of the western streams are due to the following causes—the variableness of the rainfall at their sources, the small rainfall in their lower basins, the absence of considerable feeding streams, the great evaporation, and the absorbent nature of the soils particularly over the artesian basin.

The most important river is the Murray, which forms part of the southern boundary of the State. It has a total length of 1,600 miles, of which 1,200 are within New South Wales, and along this course a more or less regular stream flows, fed by the snows of the southern highlands. For about seven months of the year the river is navigable as far as Wentworth for large river-boats, and for smaller craft as far as Albury. The Murrumbidgee, 1,050 miles in length, ranks next to the Murray in regularity and volume of flow. In its lower course it receives the Lachlan, 850 miles in length. Longest of



all the rivers of Australia is the Darling, which, from its source to the sea, measures 2,310 miles. It flows across western New South Wales from north-east to south-west and receives a number of rivers from South Queensland when their volume is sufficiently great, and in New South Wales receives successively the following rivers whose lengths are as shown — Gwydir, 350 miles; Namoi, 420 miles; Macquarie, 590 miles; Castlereagh, 340 miles; and Bogan, 370 miles. Particulars of the water storage schemes in connection with these rivers are published in Part "Water Conservation and Irrigation" of this Year Book.

#### *Lakes.*

The lakes of New South Wales are unimportant, but may be classified in five groups,—the coastal lakes or lagoons, those of the tablelands, and of the Western Plains, the lakes and tarns of the Kosciusko Plateau, and the great artificial lake at Burrinjuck used for irrigation purposes.

The coastal lakes have been described already.

The lakes of the Tableland owe their origin to volcanic and other geological disturbances of former ages, and are nearly all situated in the southern tableland. Lake George, sometimes termed the largest freshwater lake in New South Wales, occupies a depression in the Cullarin Range; it is fed by several small streams, but has no visible outlet, its waters are shallow except after a succession of wet seasons, being lost by evaporation and by soakage through the slate formation of its bed. When full, Lake George would cover an area of 60 square miles, but in average seasons a large proportion of its bed is dry and is utilised for grazing stock. Lake Bathurst lies in a circular depression about 7 square miles in area, 10 miles east of Lake George. Both these lakes are situated more than 2,000 feet above sea level.

The lakes of the Western Plains occur usually along the courses of the western rivers; they are mostly shallow natural depressions of considerable extent, which are filled during floods by the overflow of the rivers. Like the western rivers these lakes vary with the seasons, presenting an impressive appearance in wet seasons, and dwindling to a succession of ponds and mud basins in continued dry weather; but sometimes they serve a useful purpose in dry seasons by maintaining the flow of the rivers below the lakes for some months after the upper courses become dry.

Along the Darling River the largest lake beds on the right bank are:—Narran, above Brewarrina; Cawndilla, Menindie, and Tandon, near Menindie; and, on the left bank, Gunyulka in the Wilcannia district.

Within the Lachlan basin the most important are Lake Cowal, which is situated about 40 miles from Forbes, receiving the drainage of the Bland Plain and the overflow of floodwaters from the Lachlan River; and Lake Cudgellico, which also receives the floodwaters of the Lachlan in wet seasons.

Lake Victoria, on the right bank of the Murray River, in the south-western corner of New South Wales, is connected with the Murray by Frenchman's Creek. It covers an area of 26,000 acres, and holds 17,000,000 cubic feet of water when full. It has been selected as the site of a reservoir in connection with the River Murray Irrigation Scheme.\*

The Kosciusko Lakes are due to the formation of barriers of moraine material left behind by glaciers. They are situated about 6,000 feet above sea-level. The principal are the Blue Lake, Lake Albina, Cootapatamba and Club Lakes, and Hedley Tarn.

\* See Part "Water Conservation and Irrigation."

The Burrinjuck Dam, near the head of the Murrumbidgee River, is a large lake covering 12,740 acres and containing when full 33,612,000,000 cubic feet of water impounded by a retaining wall 240 feet in height. Its outlet is by the Murrumbidgee River, whose flow is thereby regulated to meet the needs of an extensive irrigation area on its bank 240 miles below the dam.\*

#### *Mineral Springs.*

Mineral springs of varied composition are found in many parts of the State; in some cases the waters have been marketed as table-waters, and some are of medicinal value. Such springs occur at Mittagong, Ballimore, Rock Flat, Bungonia, Jarvisville, and Yarrangobilly.

### GEOLOGY, FAUNA, FLORA.

A description of the geological formation of New South Wales, the fauna and the flora, was published in the 1921 issue of this Year Book.

### TRANSPORT AND COMMUNICATION.

The problem of establishing an efficient system of transport in New South Wales is rendered difficult by several causes—the existence of a belt of rugged highlands comparatively near the coast, passable without difficulty at only one or two points; the consequent difficulty in connecting the coast with the interior; the absence of navigable rivers and waterways; and the scattered nature of the settlement.

In the early years of the existence of the colony the rugged approaches to the Great Dividing Range defied the efforts of explorers year after year, and successive expeditions were lost in the great blind valleys which lead from the coastal plains into the heart of the hills and there terminate in inaccessible cliffs. For nearly twenty years explorers tried in vain to discover what lay beyond these defiant mountains, and, at last, the expedition of 1813 succeeded by ignoring the natural lines of progress—the valleys—and proceeding along the crests.

Settlement promptly followed upon the discovery of the Bathurst Plains, and by the energy of Governor Macquarie the first road was opened in 1815. Following shortly upon this, a way was discovered across the mountains near Lake George, near the spot where Goulburn now stands. These routes remained the easiest lines of communication with the west and south, and when railways appeared they followed the road. Strangely enough the only real gap in the mountains—that situated opposite Newcastle and discovered by Cunningham in 1825—has not yet been utilised for traffic. The Great Northern Railway traversed the mountains by way of a higher gap at Murrurundi. The interior is connected with the sea by rail at only two points—Sydney and Newcastle.

The early policy of government made Sydney the centre of the whole settlement commercially as well as politically, and this circumstance, coupled with its advantageous situation on an unrivalled natural harbour, which speedily grew into an important shipping centre, made it from the earliest times the point from which roads inevitably radiated, and to which trade and commerce were irresistibly drawn.

Its development proceeded above that of all other towns, even before the advent of railways, despite the fact that its immediate district was not well

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\* See Part "Water Conservation and Irrigation."

adapted for agriculture and access from it to the fertile interior was impeded by difficult mountains. In point of situation Port Stephens and Jervis Bay, both excellent natural harbours, situated respectively 85 miles north and 82 miles south of Sydney, are better qualified to constitute commercial outlets for the interior, and this remark applies with especial force to Port Stephens, which is the most central port of the State and has the advantage of large coal supplies in close proximity. The development of this port is urged strongly as part of a decentralisation scheme, and it is probable that Jervis Bay will also become a shipping centre when it is opened up in connection with the establishment of the Federal capital at Canberra. There is no good harbour north of Port Stephens; and Twofold Bay, on the far South Coast, is probably too difficult of access from the interior to develop into an oversea shipping port.

Political and economic factors and the accident of settlement have thus largely outweighed considerations of natural advantage, and Sydney has developed into the commercial, manufacturing, and trading centre of practically the whole of the State. Outlying districts which are not yet connected to the metropolis by rail find their outlet in other States. Such localities are the southern Riverina, the Broken Hill district and the far North Coast, but railways are rapidly being extended to all of these.

#### SYSTEMS OF TRANSPORT AND COMMUNICATION.

The dominance of the capital city in the economic life of the community has made centralisation the outstanding feature of its systems of transport and communication. Railway, shipping, postal, cable and telegraphic services all have their centre in Sydney, which with its environs contains nearly one-half of the population of the State.

##### *Railways.*

In view of the sparse population of the interior, the construction of railways considered essential to development is a work involving considerable expenditure and a problematical return. It has, therefore, been undertaken almost exclusively by the State, the only private lines of importance being from Deniliquin to Moama on the Victorian border, from Broken Hill to the South Australian border, and certain lines on the coal-fields around Newcastle. The system of State railways is extensive and rapidly growing,\* and serves to maintain efficient communication over more than one-half of the area of the State. Beyond that area are situated the sparsely populated Western Plains, in which small development is at present possible. Only three lines have been extended into this region—the western line to Bourke, its branch to Cobar, and the line by which it is proposed to connect Broken Hill with Sydney.

The steadily growing system of lines provides a prompt and efficient means of communication and transport throughout most of the more closely settled districts and, as new settlement becomes possible, it is extended further and further, for it is generally recognised now that settlement follows rather than precedes the railway. Recent development has been rather in the construction of cross-country lines, although two important new trunk lines are in course of construction—one along the North Coast, the other to Broken Hill.

The extent of existing lines and of lines under construction is shown on the map in the frontispiece, from which it will be observed that the services are restricted mainly to the Eastern and Central Land Divisions, comprising

\* See Section relating to Railways and Tramways.

only about 60 per cent. of the area of the State, but containing nearly 98 per cent. of the population. Within these districts branch lines are being constructed rapidly as feeders to the trunk lines. The three main trunk lines are the Northern, which connects Sydney with Newcastle, and then proceeds inland and along the northern tableland to Wallangarra (492 miles) on the Queensland border, where connection is made with a line to Brisbane; the Western, from Sydney to Bourke (508 miles) on the Darling River; the Southern, from Sydney to Albury (392 miles) on the Victorian border, where connection is made with a line to Melbourne, and thence to Adelaide and Perth. There are, in addition, a number of branch lines, of which three are of especial importance—that branching from the Northern line near Maitland and proceeding along the North Coast, which will eventually shorten the rail route from Sydney to Brisbane; that from Orange to Trida, which will be extended eventually to Broken Hill near the Western boundary, distant 711 miles from Sydney, thus establishing a new route from Sydney to Adelaide and across Australia; and that which projects along the South Coast to Bomaderry (92 miles). Between these main lines numerous cross-country lines have been constructed or are in course of construction, particularly in the wheat-lands of the Western Slopes and on the fringe of the Western Plains. The Western and Southern systems are connected by two lines, and two links between the Western and Northern systems are under construction. Important branch lines also extend to Mungindi on the Queensland border, Walgett, Coonabarabran, Coonamble, Hay in the Western Riverina, Tocumwal on the Victorian border, and Bombala. The only extensive area of the State not yet served by railways is that sparsely populated region extending approximately for 300 miles west of Bourke and Cobar, and 250 miles west of Trida and Hay—a region containing nearly 100,000 square miles, but less than 50,000 inhabitants.

#### *Roads, Bridges, and Ferries.*

Beyond the railway heads, between lines, and along the coast, extensive coach services usually run under contract with the Government for mail carriage, connect the settlements. Such traffic is as a rule horse-drawn, but motor vehicles are being used more and more both for transport and communication. National roads are maintained by a special appropriation of Parliament, and the many local roads have been handed over to local control.

Main roads in New South Wales were first formed to connect the towns of Parramatta, Liverpool, Windsor, and Penrith with Sydney. All access to the interior of the country was considered barred by the apparently insurmountable sandstone precipices rising on the farther side of the Nepean, and until the year 1813 no effort to cross the mountains was attended with success. In that year Blaxland, Lawson, and Wentworth succeeded in crossing the range, and discovered the rich pastures of the Bathurst Plains. Shortly after their return the construction of a track was begun, and the Great Western Road was completed as far as Bathurst on 21st January, 1815.

The access to the fertile lands surrounding Bathurst, by means of this mountain road, gave such an impetus to settlement that it was found impossible to keep pace in the matter of road-making with the demands of the settlers. The authorities, therefore, for many years confined their attention to the maintenance of roads already constructed, and extended them in the direction of the principal centres of settlement. Had the progress of settlement subsequent to 1850 been as slow as that of the preceding years, this system would have sufficed; such, however, was not the case. The discovery of gold completely altered the circumstances, and during

the period of excitement and change which followed, so many new roads were opened, and traffic increased to such an extent, that the general condition of the public highways was by no means good. The modern system of road-making may be said to have begun in the year 1857, consequent on the creation of the Roads Department; it was not, however, until 1864 that the whole of the roads, both main and subordinate, received consideration by the Government.

The principal main roads are :—

Northern Road—length, 405 miles, from Morpeth to Maryland, on the Queensland border.

Western Road—length, 513 miles, from Sydney, through Bathurst, and many other important townships, to the Darling River, at Bourke.

Southern Road—length, 385 miles, from Sydney, through Goulburn, and other important townships to the Murray River to Albury.

South Coast Road—length, 250 miles from Campbelltown, through Coal Cliff, and along the South Coast generally, as far as Bega, whence it extends as a minor road to the southern limits of the State.

The roads have not so great an importance as they possessed before the opening of the railways, which for the greater part follow the direction of the main roads, and attract nearly all the through traffic. Thus many roads on which heavy expenditure has taken place have been more or less superseded, and the opening of new roads has been rendered necessary to act as feeders to the railways from outlying districts.

#### *Mail and Telegraphic Services.*

Highly-developed postal, telegraphic, and telephonic services under Government control have been established. Every centre of population possesses a post and telegraph office and a regular mail service, and continuous telephone services have been established in every centre of commercial importance; even outlying districts have telephone connections. Preliminary arrangements have been made to provide aerial mail services between Sydney and the capital cities of Queensland and South Australia.

Communication with Europe is closely maintained by means of four cable lines, which carry more than half-a-million messages a year, and a powerful wireless installation capable of communication with America. Regular fortnightly ocean mail and passenger services are maintained with the United Kingdom *via* Suez, and three every month *via* Canada and America. A considerable fleet of cargo steamers voyage regularly between New South Wales and other countries, and much shipping plies along the coast.\*

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\* See Part "Shipping."

## CLIMATE.

**M**ETEOROLOGICAL observations in New South Wales are directed from Sydney as the centre of a subdivision of Australia, which includes the greater part of New South Wales; a special climatological station is maintained also at Dubbo, and there are many reporting stations throughout the State. Bulletins and weather charts are issued daily from the Meteorological Bureau, and rain maps and isobaric charts are prepared.

Particulars of meteorological observations at various stations in New South Wales are published annually in part "Meteorology" of the Statistical Register of New South Wales; in some cases rainfall records from the year 1860 are given.

Signals are displayed in Sydney to give warnings of storms and to indicate fair weather, rain, and cold or heat waves; forecasts are telegraphed daily to towns in country districts, and the city forecasts are published in the early editions of the press. Special forecasts regarding cyclonic conditions are issued to the press and to the Commonwealth and State Departments of Navigation; this arrangement enables precautions to be taken in regard to shipping. Flood warnings also are given in urgent cases.

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New South Wales is situated entirely in the temperate zone, and its climate is mild and equable, being free from extremes of heat and cold. Abundant sunshine is experienced in all its seasons, and this factor exercises a strong influence on the lives and character of the people. In the capital city an average of only twenty-three days per year are without sunshine, and the average range between the hottest and coldest months is only about 17° Fah. In the hinterland there is even more sunshine, and the range of temperature is greater, but observations with the wet bulb thermometer show that in no part of the State is the temperature maintained at so high a level as to be detrimental to the health and physique of persons engaged in outdoor labour.

Practically the whole of the State is subject to the bracing influence of frosts during five or more months of the year, but although snow has been known to fall over nearly two-thirds of the State, it is of comparatively rare occurrence, except in the tableland districts; perennial snow is found only on the highest peaks of the southern tableland.

The seasons are not so well defined in the western interior as on the coast, but are generally as follow:—Spring during September, October, and November; summer during December, January, and February; autumn during March, April, and May; winter during June, July, and August.

### *Winds.*

The weather in New South Wales is determined chiefly by anticyclones, or areas of high barometric pressure, with their attendant tropical and Antarctic depressions, in which the winds blow spirally outward from the centre or maximum. These anticyclones pass almost continuously across the face of the continent of Australia from west to east, and the explanation of the existence of such high-pressure belts lies probably in the fact that this area is within the zone in which polar and equatorial currents meet and for some time circulate before flowing north and south. The easterly movement depends on the revolution of the earth.

A general surging movement occasionally takes place in the atmosphere, sometimes towards, and sometimes from, the equator. The movement

causes sudden changes in the weather—heat when the surge is to the south, and very cold weather when it moves towards the equator. Probably these sudden displacements of the air systems are due to thermal action, resulting in expansion or contraction in the atmospheric belts to the north and south of Australia.

New South Wales is peculiarly free from cyclonic disturbances, although occasionally a cyclone may result from monsoonal disturbances, or may reach the State from the north-east tropics or from the Antarctic low-pressure belt which lies to the south of Australia.

In the summer months the prevailing winds on the coast of New South Wales blow from the north, with an easterly tendency which extends to, and in parts beyond, the highlands; in the western districts the winds are usually from the west. Southerly winds, which are characteristic of the summer weather on the coast, occur most frequently during the months from September to February, and between 7 p.m. and midnight. These winds, which blow from the higher southern latitudes, cause a rapid fall in temperature, and are sometimes accompanied by thunderstorms.

During winter, the prevailing direction of the wind is westerly. In the southern areas of the State the winds are almost due west, but proceeding northwards there is a southerly tendency, while on reaching latitudes north of Sydney the direction is almost due south. When they reach the north-eastern parts of the State, these winds are deflected in a westerly direction, and are merged in the south-east trade winds north of latitude 30°. During the cold months of the year, Australia lies directly in the great high-pressure stream referred to previously, and the high pressure when passing over the continent tends to break up into individual anti-cyclonic circulations.

#### *Rainfall.*

New South Wales is dominated by two rain belts—the tropic and the antarctic. The amount of rainfall varies very greatly over the wide expanse of territory, the average decreasing from more than 80 inches per annum in the north-eastern corner to less than 7 inches in the north-western corner. This vital factor plays a very powerful part in determining the character of settlement.

Generally, the wet season extends over the first six months of the year, although occasionally the most serviceable rains occur in the spring. The coastal districts receive the heaviest falls, ranging from 30 inches in the south to 80 inches in the north. Despite their proximity to the sea, the mountain chains are not of sufficient elevation to cause any great condensation; so that, with slight irregularities, the average rainfall gradually diminishes towards the north-western limits of the State.

An approximate classification of areas in New South Wales (including the Federal Territory) in accordance with the average annual rainfall shows the following distribution:—

Annual Rainfall.	Area.		Proportion per cent. of total area.	Annual Rainfall.	Area.		Proportion per cent. of total area.
	Sq. Miles.	Acres.			Sq. Miles.	Acres.	
inches.				inches.			
Over 70	668	427,520	·2	20 to 30	77,202	49,409,280	24·3
60 to 70	1,765	1,129,600	·6	15 to 20	57,639	36,838,960	18·6
50 to 60	4,329	2,770,560	1·4	10 to 15	77,268	49,451,520	24·9
40 to 50	15,804	10,114,560	5·1	Under 10	44,997	28,798,080	15·0
30 to 40	30,700	19,648,000	9·9				
				Total ...	310,372	198,638,080	100 0



It is apparent that only 42 per cent. of the area of the State receives rains exceeding on the average 20 inches per year. Over the greater part of the State the annual rainfall varies on the average between 20 per cent. and 30 per cent. from the average, and continued periods of dry weather are not uncommon.

Three clearly defined seasonal rain-belts cut diagonally across the State from west to east with a southerly incline. A winter rain region, which includes the southern portion of the Western Plains and about two-thirds of the Riverina, is bounded on the north by a direct line from Broken Hill to Wagga with a curve around Albury. A summer rain region, including the whole of the northern subdivisions, is bounded on the south by a line which waves regularly, first south and then north of a direct line from the north-western corner of the State to Newcastle; and between these, where the two dominating rain-belts merge, there extends a region, including the central and south-eastern portions of the State, which enjoys rains of a non-seasonal character; between Nowra and Broken Bay a narrow coastal strip receives most of its rain in the autumn.

The chief agencies causing rainfall are antarctic depressions, monsoonal depressions, and anticyclonic systems. Antarctic depressions are the main cause of the good winter rains in the Riverina and on the South-western Slope. A seasonal prevalence of this type of weather would cause a low rainfall on the coast and tablelands, and over that portion of the inland district north of the Lachlan River. A monsoonal prevalence ensures a good season inland north of the Lachlan, but not necessarily in eastern and southern areas. An anticyclonic prevalence results in good rains over coastal and tableland districts, but causes dryness west of the mountains.

The distribution of rainfall is dependent on three factors—(1) the energy present in the atmospheric systems, (2) the rate of movement of the atmospheric stream, and (3) the prevailing latitudes in which the anticyclones are moving.

#### *Evaporation.*

Investigations are being made in order to gauge the amount of evaporation in New South Wales, and it has been found that the amount of evaporation is so great as to make it a climatic element only second in importance to rainfall in its influence on the State. Results so far obtained show that the rate of evaporation (measured by the loss from exposed water) increases from 40 inches per annum on the coast to nearly 100 inches in the north-western corner of the State, that is, the amount of evaporation is inversely related to the rainfall of the respective districts. Indeed, only on a small coastal patch in the north-eastern corner does the rainfall exceed the evaporation measured as above. This fact sheds light on the special needs of New South Wales in conserving surface water and soil moisture not only for successful agriculture, but also in connection with pastoral pursuits.

#### CLIMATIC DIVISIONS.

The territory of New South Wales may be divided into four climatic divisions, which correspond also with the terrain—the Coast, the Tablelands, the Western Slopes of the Dividing Range, and the Western Plains.

As would be expected, the northern parts of the State are generally warmer than the southern, the difference between the average temperatures of the extreme north and south being about  $7^{\circ}$  on the coast,  $5^{\circ}$  on the tablelands, and  $6^{\circ}$  on the slopes and plains. It should be noted, however, that the width of the State decreases from nearly 700 miles on the coast to

about 340 miles on the western boundary. From east to west the average mean annual temperatures vary little except where altitudes are different, but the summer is usually hotter and the winter usually colder in the interior than on the coast. Thus at Sydney the average temperatures range from  $71^{\circ}$  in summer to  $54^{\circ}$  in winter, as compared with  $76^{\circ}$  in summer and  $51^{\circ}$  in winter at Wentworth in the same latitude in the western interior. Similar variations are found in the north. The mean daily range at any station is seldom more than  $30^{\circ}$  or less than  $13^{\circ}$ .

### Coastal Division.

In the Coastal division, which lies between the Pacific Ocean and the Great Dividing Range, the average rainfall is comparatively high and regular, and the climate, though more humid, is generally milder than in the interior.

Sydney is situated half-way between the extreme northern and southern limits of the State. Its mean annual temperature is  $63^{\circ}$  Fahrenheit. The mean range is only  $17^{\circ}$ , calculated over a period of sixty-three years, the mean summer temperature being about  $71^{\circ}$ , and the mean winter temperature  $54^{\circ}$ .

The following table shows the average meteorological conditions of Sydney based on the experience of the sixty-three years ended 1921:—

Month.	Hourly Average Reading of Standard Barometer, corrected to 29.92 in. Hg., Standard Gravity and Mean Sea Level.	Temperature (in shade).			Rainfall.			
		Mean Standard.	Average Reading of Maximum Thermometer.	Average Reading of Minimum Thermometer.	Average.	Greatest.	Least.	Average number of days Rain
		°	°	°	inches.	inches.	inches.	
January ... ..	29.903	71.7	78.4	64.9	3.61	15.26	0.42	14.1
February.. ...	29.946	71.2	77.5	64.9	4.45	18.56	0.34	14.0
March ... ..	30.012	69.2	75.6	62.9	5.03	18.70	0.42	15.0
April ... ..	30.074	64.6	71.1	58.1	5.39	24.49	0.06	13.4
May ... ..	30.082	58.6	65.2	52.1	5.16	23.03	0.18	15.1
June ... ..	30.058	54.5	60.8	48.2	4.90	16.30	0.19	12.6
July ... ..	30.065	52.6	59.3	45.9	4.88	13.21	0.12	12.5
August ... ..	30.070	55.0	62.5	47.6	3.03	14.89	0.04	11.3
September ...	30.019	59.1	66.8	51.5	2.89	14.05	0.08	12.0
October ... ..	29.972	63.4	71.1	55.8	2.95	11.14	0.21	12.6
November ...	29.940	67.1	74.5	59.7	2.88	9.89	0.07	12.4
December ...	29.882	70.1	77.3	62.9	2.87	15.82	0.23	13.0
Annual ... ..	30.002	63.1	70.0	56.2	48.04	82.76	23.01	158.0

The North Coast districts are favoured with a warm, moist climate, the rainfall being from 40 to 80 inches annually. The mean temperature for the year is from 66° to 69°, the summer mean being 75° to 78°, and the winter mean 56° to 59°. On the South Coast the rainfall varies from 30 to 60 inches, and the mean temperature ranges between 57° and 63°, the summer mean being from 66° at the foot of the ranges to 70° on the sea coast, and the winter from 48° to 54° over the same area.

Coastal rains come from the sea with both south-east and north-east winds, being further augmented in the latter part of the year by thunderstorms from the north-west.

The following table shows the meteorological conditions of the principal stations in the Coastal Division, arranged in the order of their latitude. These stations are representative of the whole division, and the figures are the average of a large number of years:—

Station.	Least Distance from East Coast.	Altitude.	Temperature (in Shade).						Rainfall— Mean Annual.
			Mean Annual.	Mean Summer.	Mean Winter.	Mean Daily Range.	Highest.	Lowest.	
	miles.	feet.	°	°	°	°	°	°	inches.
<i>North Coast—</i>									
Lismore ... ..	13	52	67·2	75·4	57·0	22·5	116·2	23·0	51·05
Grafton ... ..	22	40	67·6	76·3	57·4	25·9	114·0	24·9	35·24
<i>Hunter and Manning—</i>									
Singleton ... ..	40	135	64·1	76·1	52·1	20·3	113·9	22·0	28·67
West Maitland ... ..	18	40	64·2	74·7	53·0	21·1	114·0	28·0	34·01
Newcastle ... ..	1	34	64·6	72·3	55·4	15·1	110·5	31·0	46·41
Sydney ... ..	5	146	63·1	71·0	54·0	13·7	108·5	35·9	48·04
<i>South Coast—</i>									
Wollongong ... ..	0	54	63·0	70·1	54·8	16·8	113·4	31·9	46·02
Nowra ... ..	6	30	62·8	71·1	54·0	19·9	109·5	32·6	38·75
Moruya Heads ... ..	0	50	61·0	68·1	53·0	19·1	114·8	26·3	34·93
Bega ... ..	8	50	60·3	69·6	50·0	26·6	109·0	20·0	33·47
Eden ... ..	0	107	60·0	67·7	51·8	14·2	106·0	29·3	34·18

Taking the coast as a whole, the difference between the mean summer and mean winter temperature is about 17° only.

#### Tablelands.

On the Northern Tableland the rainfall is consistent, ranging from 30 inches in the western parts to 40 inches in the eastern. The temperature is cool and bracing, the average for the year being between 54° and 60°; the mean summer temperature lies between 65° and 70°, and the mean winter between 43° and 45°. The Southern Tableland is the coldest part of the State, the mean annual temperature being about 56°. In summer the mean ranges from 57° to 68°, and in winter from 34° to 44°. At Kiandra, the elevation of which is 4,640 feet, the mean annual temperature is 44·4°. Near the southern extremity of the tableland, on the Snowy and Munnion Ranges, the snow is present generally throughout the year.

The statement below shows, for the Tablelands, similar particulars to those already given for the Coastal Division:—

Station.	Least Distance from East Coast.	Altitude.	Temperature (in Shade).						Rainfall — Mean Annual.
			Mean Annual.	Mean Summer.	Mean Winter.	Mean Daily Range.	Highest.	Lowest.	
<i>Northern Tableland—</i>	miles.	feet.	°	°	°	°	°	°	inches.
Tenterfield ...	80	2,827	53·8	69·0	47·2	24·4	107·1	11·9	32·30
Inverell ...	124	1,980	60·0	71·8	47·3	29·2	110·6	13·4	30·46
Glen Innes ...	90	3,518	56·4	67·2	44·1	25·3	107·3	14·4	31·83
<i>Central Tableland—</i>									
Cassilis (Dalkeith) ...	120	1,500	60·2	72·2	47·3	24·8	109·5	19·0	23·58
Mudgee ...	121	1,635	60·0	72·6	46·8	30·3	114·9	15·0	25·75
Bathurst ...	96	2,200	57·1	69·8	44·2	28·0	112·9	13·0	23·93
Kurrajong Heights ...	35	1,870	53·3	61·7	43·9	13·3	99·5	25·5	50·09
Katoomba ...	53	3,349	53·6	63·0	43·2	15·4	100·0	25·9	55·75
<i>Southern Tableland—</i>									
Crookwell ...	81	2,000	52·0	64·7	39·4	23·7	100·8	12·1	32·09
Goulburn ...	54	2,129	56·1	67·7	44·1	24·0	111·0	13·0	24·84
Yass ...	92	1,657	57·2	70·3	44·7	24·3	108·0	21·0	23·93
Kiandra ...	88	4,640	44·4	55·3	32·6	20·7	91·0	<sup>4</sup> below zero	64·42
Bombala ...	37	3,000	53·0	64·0	42·1	24·7	98·5	17·0	23·22

#### Western Slopes.

On the Western Slopes the rainfall is distributed uniformly, varying from 20 inches in the western parts to 30 inches in the eastern; the most fertile part of the wheat-growing area of the State is situated on the southern part of these slopes, where the average rainfall is about 25 inches. The mean annual temperature ranges from 69° in the north to 60° in the south; in the summer from 81° to 74°, and in the winter from 53° to 47°.

North of the Lachlan River, good rains are expected from the monsoonal disturbances during February and March, although these may come as late as May, and at times during the remainder of the year. These monsoonal or seasonal rains are caused by radiation in the interior of Australia during the summer months, when the heat suspends the moisture accumulated chiefly from the Southern Ocean.

In the Riverina district, south of the Murrumbidgee generally, and on the South-western Slopes, fairly reliable rains, light but frequent, are experienced during the winter and spring months.

The next statement gives, for the principal stations on the Western Slopes, information similar to that shown for Coast and Tablelands:—

Station.	Least Distance from East Coast.	Altitude.	Temperature (in Shade).						Rainfall — Mean Annual.
			Mean Annual.	Mean Summer.	Mean Winter.	Mean Daily Range.	Highest.	Lowest.	
<i>North Western—</i>	miles.	feet.	°	°	°	°	°	°	inches.
Moree ...	204	680	67·5	80·4	53·2	30·2	117·3	18·0	23·63
Bingara ...	153	1,200	64·4	77·3	50·3	28·9	112·5	16·0	31·28
Quirindi ...	115	1,278	63·9	76·5	48·5	27·1	113·6	17·0	27·60
<i>Central Western—</i>									
Dubbo ...	177	863	63·6	77·5	49·5	27·9	115·4	16·9	22·13
<i>South Western—</i>									
Young ...	140	1,416	59·4	73·6	45·8	26·2	113·9	20·3	25·16
Wagga Wagga ...	158	615	62·2	76·2	48·7	25·3	119·0	18·4	21·40
Urana ...	213	400	62·3	76·2	48·1	22·6	117·0	18·4	17·27
Albury ...	175	531	60·8	74·3	47·7	27·3	117·3	19·9	27·95

*Western Plains.*

The Western District consists of a vast plain, the continuity of which is broken only by the Grey and Barrier Ranges. Owing to the absence of mountains in the interior, the annual rainfall over a great part of this division, which lies in the zone of perpetual high pressure, does not exceed 10 inches. It increases from 8 inches on the western boundary to 10 and 15 inches along the Darling River, and 20 inches on the eastern limits. The mean annual temperature ranges from 69° in the north to 62° in the south; in the summer from 83° to 74°, and in the winter from 53° to 45°.

Although the summer readings of the thermometer in this district may be from 10° to 20° higher than those on the coast, the heat is not distressing. Excessive heat is experienced occasionally, and with many summers intervening, its occurrence in all probability being due to a temporary stagnation in the easterly atmospheric drift. Under normal conditions, air entering Western Australia with a temperature of 70° or 80° would accumulate only 20° to 25° by contact with the radiation from the soil during its passage across the continent.

The winter, with an average temperature over 50°, accompanied by clear skies and an absence of snow, leaves little to be desired from the standpoint of health; while, also owing chiefly to the dryness of the climate, these inland regions produce the best merino wool in the world.

The meteorological conditions of the Western Plains and the Riverina division will be seen from the following statement, corresponding to those given already for the other divisions of the State:—

Station.	Least Distance from East Coast.	Altitude.	Temperature (in Shade).						Rainfall— Mean Annual.
			Mean Annual.	Mean Summer.	Mean Winter.	Mean Daily Range.	Highest.	Lowest.	
	miles.	feet.	°	°	°	°	°	°	inches.
Brewarrina ... ..	345	430	68·7	82·8	54·1	26·4	120·0	28·0	15·51
Bourke ... ..	386	350	69·2	83·7	54·1	27·6	127·0	25·0	14·01
Wilcannia ... ..	473	246	66·4	80·3	52·2	26·1	120·8	21·8	10·13
Broken Hill ... ..	555	1,000	64·7	77·8	51·2	23·6	115·9	28·5	10·08
Condobolin ... ..	227	700	65·4	79·0	51·3	27·1	122·2	20·0	17·18
Wentworth ... ..	478	144	63·6	76·3	51·4	25·7	119·0	21·0	12·19
Hay ... ..	309	291	63·2	76·2	50·3	27·4	117·3	22·9	14·26
Deniliquin ... ..	287	268	62·0	74·8	49·5	25·3	121·1	18·0	16·30

## OBSERVATORY.

Sydney Observatory, lat. 33° 51' 41·1" south, long. 151° 12' 23·1" east, established in the year 1856, is a State institution. The work of the Observatory is of an astronomical character; the principal instruments are the transit circle, astrograph, equatorial, and seismograph. Owing to the unsuitableness of the atmosphere in Sydney the astrograph has been removed to Pennant Hills. The principal scientific work is the determination of the

position, distribution, and movement of stars in the region allotted to Sydney (viz.,  $52^{\circ}$  to  $65^{\circ}$  south declination) in the great international scheme. In addition, occasional observations, such as those of comets, are made with the equatorial, and systematic records of earth tremors are sent to the Earthquake Committee of the British Association for the Advancement of Science. Practical work embraces the determination and notification of the standard time of the State; correspondence of an educational character on astronomical matters, and day and evening reception of visitors interested in astronomy.

#### STANDARD TIME.

The mean time of the 150th meridian of east longitude, or 10 hours east of Greenwich, has been adopted as the standard time throughout New South Wales, except in the district of Broken Hill, where South Australian standard time has been adopted, viz.,  $142\frac{1}{2}^{\circ}$  of east longitude, or 9 hours 30 minutes east of Greenwich. In Western Australia the standard time is the  $120^{\circ}$  of east longitude, or 8 hours east of Greenwich; in the States of Queensland, Victoria and Tasmania, the standard time is the same as in New South Wales.

#### TIDES.

A self-recording tide-gauge has been in operation at Fort Denison, in Port Jackson, since 1867. The tidal datum adopted is Low Water, Ordinary Spring Tide. Taking this as zero, the mean sea-level is 2.52 feet; ordinary low water, 0.78 feet; ordinary high water, 4.20 feet; and the mean daily range is 3 feet 5 inches. The lowest tide was recorded on 16th July, 1916, when the gauge fell 1 foot 3 inches below datum. The highest tide was recorded on 26th May, 1880, viz., 7 feet  $6\frac{1}{2}$  inches; in 1876 the gauge recorded 7 feet  $4\frac{1}{2}$  inches on 22nd June, and 7 feet 3 inches on 21st July. On 3rd August, 1921, the gauge registered 7 feet 2 inches, and on that day occurred the greatest tidal range on record—6 feet  $9\frac{1}{2}$  inches.

At Port Hunter, the average rise and fall of ordinary tides is 3 feet  $4\frac{1}{2}$  inches, and of spring tides 5 feet  $5\frac{1}{2}$  inches; the greatest range being 6 feet  $6\frac{1}{2}$  inches. The highest tide registered was 7 feet 4 inches in May, 1898.

On the coast the average rise of spring tides may be taken as 5 feet 6 inches.

## HISTORY.

**T**HE name "New South Wales" was given to the whole of the eastern part of Australia in 1770 probably by Captain Cook, and for a short period (1814 to 1840) the distant islands of New Zealand were among the dependencies of the colony founded at Port Jackson in 1788.

The early history of New South Wales traces its transition from a Crown Colony, used as a penal settlement, to a self-governing dominion through a period of sixty-eight years. This period was marked by a process of disintegration of its huge area, nearly half the size of Europe, into six smaller political units and by a slow development of settlement carried out, often in defiance of the Government, by the few hardy pioneers who crossed the world to make their home in this new land of the antipodes. How slow was this development can be appreciated best by contrast with the phenomenal expansion of the United States of America, which already, by 1856, had a population as great as that of the United Kingdom and 100 times greater than that of New South Wales.

New South Wales inherited current British traditions of government and public institutions, and in 1856 received a flexible frame of government on the English model. The democratic spirit natural in a new land moulded the constitution and form of society on modern principles of equality without any bitter struggle for freedom. This fact, combined with the absence of virile native races and of foreign aggression, has rendered the history of the State unusually placid, so that its development, at all events until the European War (1914-18), was moulded almost entirely by economic factors.\*

The following statement indicates chronologically the main events in the development of the State up to the introduction of responsible government in 1856:—

- 1770. Captain Cook discovered the eastern coast of Australia.
- 1788. First settlement founded.
- 1791. First grant of land to settlers.
- 1793. Free immigrants arrived.
- 1794. Settlement established on the Hawkesbury River.
- 1795. First plough introduced.
- 1797. Merino sheep imported. Coal discovered at Coal Cliff and Port Hunter.
- 1801. Hunter River coal mines worked.
- 1803. First newspaper published (*Sydney Gazette*).
- 1805. MacArthur began sheep farming at Camden.
- 1807. Merchantable wool first exported (245 lb.).
- 1813. Blue Mountains crossed.
- 1814. Civil Law Courts created. New Zealand proclaimed a dependency of New South Wales.
- 1815. Settlement founded on Bathurst Plains.
- 1817. Exploration of interior begun.
- 1821. Settlement at Port Macquarie.
- 1823. First Constitution. Trial by jury instituted.
- 1824. Censorship of press abolished.

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\* A brief review of the expansion of population, and of rural settlement, will be found in later parts of this Year Book, and of the early forms of Government in the Year Book for 1921.



- 1825. First land regulations issued. Tasmania practically separated from New South Wales.
- 1827. Colony became self-supporting. Boundary of New South Wales moved westward.
- 1828. Second Constitution. All English laws applicable to New South Wales brought into force. Assisted immigration introduced. Richmond River discovered.
- 1831. First land sales.
- 1834. Settlement established at Twofold Bay.
- 1836. Religious equality established. South Australia founded as a separate colony.
- 1838. Assignment of convicts ceased.
- 1840. Transportation of convicts to New South Wales abolished. New Zealand separated from New South Wales.
- 1842. Third Constitution—Representative Government. Settlement at Moreton Bay proclaimed.
- 1843. Financial crisis.
- 1851. Gold discovered. Victoria separated from New South Wales.
- 1852. First trade union formed. Sydney University opened.
- 1855. First railway built.
- 1856. Fourth Constitution—Responsible Government.

#### 1856-1872.

The Constitution Act of 1856 conferred a system of government, closely modelled on that of the United Kingdom, upon a community of one-quarter of a million people in a territory (omitting Queensland) two and a half times as large as the United Kingdom. Of this community one-third had newly arrived in the gold rushes; of the remainder few had been born in the country, and a considerable proportion had unenviable antecedents. With the continuance of gold finds, a very rapid proportional growth of population set in, and in the next fifteen years the number of inhabitants doubled. It is not surprising, therefore, that in these circumstances and in the lack of an intimate knowledge of the workings of the machinery of parliamentary government the new administration was at first unstable and the times were somewhat lawless. In the first five years no less than seven Ministries held office and four Parliaments sat. But gradually the workings of the new constitution became smoother. Manhood suffrage and election by secret ballot were introduced in 1858, and at the first constitutional crisis in 1861, involving the fate of the Land Bills, the will of the electorates gained the recognised supremacy which it has since held.

The lawless instincts of certain elements of the population were excited in some measure by the turbulence of the gold rushes, and found expression in three ways—in the anti-Chinese riots on the gold-fields of Lambing Flat in 1861; in a revival of bushranging from 1861 to 1867 after thirty years' quiescence; and in the wild scramble for land under the loosely enacted laws of 1861, which created bitter conflicts between free selectors and squatters, and left wide scope for malpractices such as "dummying" and blackmail.

But when the gold fever began to subside in the seventies many newcomers settled down as landholders, and sheepraising rapidly became the staple industry of the State. The industrial depression of the sixties passed away, the new Government took firm control, and an era of prosperity and rapid progress began. With the separation of Queensland in 1859 the territory of New South Wales became confined within its present limits. Religious

equality was consummated in 1862 by the abolition of State aid to religion, and in 1866 all schools receiving State aid were placed under Government control. The construction and working of railways was made almost exclusively a Government function, and lines were opened from Newcastle to Maitland (1857), from Sydney to Penrith (1862), and to Goulburn (1869). Telegraphic communication was established between Sydney, Melbourne, and Adelaide in 1858 and Brisbane in 1861, while the cable service to England was opened for business in 1872.

#### 1873-1893.

Rapid as had been the disorderly progress since the discovery of gold, the country now settled down to orderly ways, and yet more rapid headway was made in the next twenty years. Although the activity in gold mining subsided, immigrants continued to arrive freely; but after reaching half-a-million in 1871, the population only attained the first million in 1887. Flocks grew, and New South Wales soon gained importance as one of the main sources of the world's supply of wool. Indeed, in 1891 the number of sheep in New South Wales reached its highest level. The tin-mining fields were opened in 1872, the richest silver-lead fields of the world were discovered at Broken Hill in 1883, and coal mining steadily increased in importance. This rapid expansion of the primary industries produced rapid expansion throughout the country. A vigorous policy of public works was initiated by the Government in 1872 and continued until 1885; during the period of twenty years under review nearly £50,000,000 was borrowed by the Government and expended upon developmental works, principally railways. Rail communication was established with Orange by 1877, and lines were extended to the southern border by 1883, and the northern by 1889. The first telephonic services were established in Sydney in 1880.

Some national ideals began to take definite shape, and settled policy in many provinces of government became the result. The duration of Parliament was limited finally to three years in 1874; the education question was decided in 1880, when a national system of secular and compulsory education for all children between the ages of 6 and 14 years was introduced; in 1888 the further influx of Asiatics was checked effectively, and the principle of "White Australia" firmly established. At the same time the serious difficulties of the community began to assume formidable proportions in the land and labour problems. Although the bitter struggle for the possession of land subsided as years passed, it was found that the policy of disposing of Crown lands by the free and easy methods of earlier years produced a pronounced shortage of land for settlement. Parliament was engaged frequently with the task of promoting genuine and closer settlement, and of reconciling the conflicting rights and interests of landholders and land seekers. The practice of securing possession of land by "dummying" was prohibited in 1875, and in 1884 stability of tenure was granted to pastoral lessees. In 1885 the present system of land administration by local land boards in land board districts and territorial divisions was introduced, placing the disposal of this most important national asset on an orderly basis, although the problem of promoting closer settlement remained unsolved.

The question of fiscal policy was a prominent issue at Parliamentary elections during this period, and a change of Government sometimes involved a reversal of existing tariff arrangements. Thus in 1874 customs taxes were abolished, except for a few specific duties on liquor and narcotics. A Protectionist tariff, introduced in 1886, was repealed in the following year but was re-imposed in 1892, to be revoked four years later after a Free-trade Party had gained office.

Immigration from Europe to New South Wales was at no period nearly so great as to the United States, and, indeed, during the period 1877-1886 the most active decade of immigration ever experienced in New South Wales—the net gain of population by migration was only 200,000. Yet, despite the vast territory of the State, people settled in the towns and city rather than in rural districts, with the consequence that the population steadily became urban rather than rural in character, and the predominant interests industrial in the narrow sense. This development largely determined the course of politics, and progress in the country, and its influence became clearly apparent in a growing industrial agitation. These years were affected by frequent strikes, and in the late eighties the effects of industrial ferment apparent in other countries were marked by the spread of socialistic doctrines, the visit of propagandists advocating a new social order and the strong undercurrent of sympathy evinced in the cause of strikes abroad. In 1881 a Trade Union Act was passed removing all existing legal restrictions on combinations of workmen for industrial purposes. These events produced a very rapid growth in trade unionism, which became a most important factor in the economic life of the community and had its counterpart among organisations of employers.

While these developments were proceeding the commercial prosperity began to show signs of weakening, and after 1885 the volume of trade contracted, the programme of public works was curtailed, and unemployment became rife. These circumstances further embittered industrial relationships, and in the prevailing discontent the efforts of the new unions to improve conditions of employment culminated in the maritime strike of 1890—one of the most momentous industrial events in the history of the State. The strikers failed in this industrial action, and unionism began to turn its attention to parliamentary action to further its industrial aims. This plan of political action led to the development of a typically Australian form of unionism, and to the rise of the Labour Party as a power in Parliament; it induced a pronounced type of party government, characterised by pledges and “caucuses,” and a new cleavage of political interests was formed.

These important events were accompanied by the worst financial crisis experienced in the State. The industrial depression gradually became more severe after 1885, and a series of world crises signalised by the Baring crisis of 1890 in England, served to aggravate local conditions. In 1893 the business failures and alarms of two years' duration culminated in the suspension of payments by thirteen out of twenty-five local banks, with consequent disaster to the commerce and industry of the State. This severe experience was productive of much good. More discipline was introduced into the financial system, securities were more carefully scrutinised before acceptance, certain bogus institutions ceased to exist, the banks associated more closely, and an office was opened for daily clearances between banks.

Moreover, the withdrawal of English capital from local investments encouraged local saving and spontaneous internal development.

#### 1894-1900.

After the financial crisis industrial depression became more acute; it was intensified by the continuance of low prices for wool, the withdrawal of British capital from local investments, a succession of bad seasons, and the diminution of Government expenditure from loans. Immigration practically ceased in 1893 and did not revive until 1905, unemployment became prevalent, conditions of employment ceased to improve, and some emigration was evident. At first a number of strikes occurred, with disaster to the strikers;

trade unionism lost power and many unions decayed; but although the numerical strength of the Labour Party in Parliament decreased, it was sufficient to influence the passage of some most important industrial legislation and to effect a change of Government in 1899. This movement was consummated in 1901 by the enactment of provision for a system of compulsory industrial arbitration, which has had a most important influence on the subsequent economic development of the State. These matters and the important questions of federation and fiscal policy dominated politics. The decision in 1899 of the six Australian States to federate ultimately brought about a reversion from the virtual "free-trade," adopted by the State Government in 1896, to "protection," introduced by the Commonwealth Government in 1901. A policy of non-political control of appointments and promotion in the Civil Service was adopted in 1895.

Most important changes had gradually come about in the primary industries. Wheatgrowing expanded steadily, until an export trade was established in 1898; refrigeration was applied to sea cargoes, and an important oversea trade in butter and frozen meat grew up. The prices realised for wool improved gradually after 1896, and as buyers continued to seek wool at its source, growers benefited by the speedy returns from Sydney wool sales. With these developments the industrial outlook brightened, and a period of remarkable prosperity opened.

#### 1901-1910.

In these happy circumstances the Commonwealth of Australia came into being. The new Government was clothed with a wide range of powers, concurrent with those of the State Government, and in a number of important Federal matters, viz., customs, excise, defence, coinage, currency, bounties on production and export, naturalisation, extradition, post and telegraphs, lighthouses, quarantine, and certain minor matters it was given exclusive authority. Henceforward the activities of the Commonwealth were important factors in determining the course of State development. A policy of encouraging local manufactures was adopted in 1901, when, in October, uniform customs duties were imposed; a Federal High Court was established with a general appellate jurisdiction—in some cases final; in 1903 a Commonwealth Court of Conciliation and Arbitration was established with jurisdiction in interstate industrial matters.

With the introduction of a system of industrial arbitration, there set in more intense development in the political and industrial systems of the State, and an era of sectional combination to secure common objects. Trade unionism spread rapidly as workers combined to obtain the assistance of the Court of Arbitration in improving their working conditions. Employers organised in order to meet the situation unitedly, and an Employers' Federation was founded in 1903. In Parliament a new significance attached to party organisation, so that with the continued advocacy of solidarity, the pledge, party platform, party meetings and caucuses, the system sometimes known as "machine politics" developed peculiarly local characteristics. These developments in the industrial and political spheres had their counterpart in the commercial world in the rapid growth of joint stock companies to handle business on a large scale, and in the formation of trusts and combines for the more effective prosecution of business. From time to time restrictive legislation was introduced.

Although the conflict of party interests became more strenuous, a new political and social consciousness seemed to awaken and marked progress

was made. State assistance by pensions for indigent aged persons was provided in 1900 and for invalids in 1907; payment of compensation to workmen in cases of industrial accident was provided for in 1910, and effective measures were taken in 1908 to abolish and prevent a system of sweating female and juvenile workers. An instalment of the principle of paying wages according to needs was introduced in 1905, and the first official estimate of the living wage was made in 1907. An Act to protect the property of married women (1897) was followed in 1902 by the introduction of the women's franchise. Education again became a topic of vital interest in the community, and, after a strong agitation, a series of far-reaching reforms were begun in 1904, including the introduction of free primary education in 1906 and of reforms in the syllabus, the training of teachers and, after 1910, the enlargement of the system of secondary and University education.

This period was characterised by unsurpassed economic development, based upon the expansion of the rural industries and the improvement of foreign markets for primary products. Immigration revived after 1903, new tenures of land were introduced, a system of State finance was established to assist settlers, the Murrumbidgee Irrigation Scheme was commenced, and the tenure of land in the Western Division was placed on a liberal basis. Moreover, Local Government, which after the adverse experiences of the premature system of the forties had been confined to a small number of towns, was extended in 1906 to include hitherto unincorporated districts as "shires" covering three-fifths of the area of the State.

#### 1911-1914.

This period of prosperity, during which the State had regained its economic stability and the Federal Government had developed strength, was followed by a new movement towards assuming the responsibilities of nationhood. Much attention was devoted to schemes of local defence under the ægis of the Commonwealth Government. The nucleus of an Australian fleet was established, and a system of compulsory military training was inaugurated for home defence. A system of local coinage was introduced: the Federal Government took charge of the issue of bank notes; and the Commonwealth Bank of Australia was established. In 1911 wireless telegraphy was introduced, and the first aeroplane flight was made successfully.

Social progress continued, and the most important reforms in the primary system of education were followed by a wide extension of facilities for secondary and University education, State aid in the form of bursaries being provided in cases of financial disability. At the same time, the scope of the University was extended and provision made for an elective body of control: technical education received more attention, continuation schools and rural schools were established, and greater provision was made for medical attention to school children. The Government assumed greater responsibility in regard to housing by providing and carrying out schemes for garden suburbs, and by making advances to persons building homes. Baby clinics were opened, and maternity bonuses were instituted by the Federal Government to provide financial assistance at childbirth.

Each election after 1901 saw a greater proportion of pledged labour representatives returned to Parliament, particularly in the Federal Houses. Finally in 1910 the new party assumed office, both Federal and State, and since then has been either in charge of the Government or in direct opposition. Industrial problems constantly occupied the Legislature; much attention was given to matters of arbitration and to the problem of avoiding strikes

and lockouts, which were constantly dislocating the course of industry. The principle of the living wage was established firmly and provision made for its regular determination. Prices, employment, and monopolies in restraint of trade were all matters of live interest, and were made subjects of close inquiry both State and Federal. The rise in the cost of living, which had been steady during the previous decade, proceeded more rapidly, and with it came the need for frequent re-adjustment of wages, which, coupled with questions of hours, union principles, and working conditions, led to continual agitation among the new working-men's organisations, which were of greater relative extent in New South Wales than in any other part of the world.

The land problem received further attention. A graduated land tax was imposed upon large estates by the Federal Government to induce closer settlement through their subdivision; additional tenures on a leasehold basis were created to stay the process of alienation; the Murrumbidgee Irrigation Scheme was advanced sufficiently to receive settlers, and an additional scheme on the Murray River was agreed upon.

#### 1914-1920.

The outbreak of the European War in 1914 intruded a dominating external influence into a local situation fraught with great possibilities of economic and social progress. Although the principle of "business as usual" was at first widely urged, it was soon found that the dislocation of trade and the necessary mobilisation of the national resources to meet the demands of the times produced a re-adjustment of economic conditions and of political parties and policies which diverted the normal trend of development.

The successful prosecution of the war became the dominant issue, and the High Court decided early that the Commonwealth Government could do legally anything which might conduce to the successful prosecution of the war (subject, of course, to Imperial control). As a result wider powers were assumed in the Federal sphere than were exercised ordinarily in time of peace. A War Precautions Act placed power of issuing regulations in many important matters in the hands of the Federal Executive Government. A censorship of the press was established; trade and commerce were regulated closely to prevent trade with enemy countries and to secure adequate supplies of raw materials for the Imperial Government; investment and the import of luxuries were restricted in the interests of finance; unprecedented loans for war purposes were floated and subscribed on the local markets; prices were regulated, and comprehensive schemes of government control and marketing of primary products were initiated. Great numbers of men in the prime of life enlisted for war service, and large military encampments were maintained. Consequently production languished, but the phenomenal rise of prices due to war conditions and to the immense expenditure of money for war services and supplies created an air of artificial prosperity, which endured until the close of 1920.

Domestic politics were disrupted in 1916 on the issue of conscription for service abroad, which was submitted as a referendum to the people. The Labour Party, which held office in both State and Federal Governments, became sharply divided, and with the resultant expulsion from the Labour movement of conscriptionist members of Parliament, including the Premier and most members of the Cabinet, a new party distribution was effected and Labour lost office. The industrial ferment of previous years continued, and was increased by these events and by the failure of wages to rise as fast as the cost of living, although in many cases wartime profits were large.

The discontent in certain sections was intensified by the imprisonment of a number of members of a well-known revolutionary body in connection with the outbreak of a series of disastrous fires in Sydney. The prevailing discontent finally burst out in 1917 into the most widespread strike in the history of the State. The strikers were, however, defeated by the introduction of loyalist workers from the country districts and from Victoria, and by the unyielding attitude of the Government, and much bitterness was engendered by the conflict.

This event led in the following year to renewed attempts to secure industrial peace. A Board of Trade was appointed, with power to promote amicable relationships between employers and employees and to declare regularly a living wage. This power was exercised in 1919 to review the whole problem of the cost of living, and a substantial increase in rates of wages resulted immediately.

But the close of the war and the sudden world-wide rise of prices to unprecedented heights led to yet greater economic disorder and to a recrudescence of industrial disputes. Amid the prevailing discontent an election was held in 1920, at which the Labour Party was returned with a bare majority over the Nationalist and Progressive Parties on a policy of more effective price control, profiteering prevention, land legislation, and adjustment of finance.

Social and industrial progress continued. Further improvements were made in the system of education by providing for compulsory regular attendance of children of school age, by close supervision of private schools, the establishment of a Conservatorium of Music and a State Orchestra. All legal disabilities preventing women from holding public office or entering the learned professions were removed, the benefits of workmen's compensation were extended to all classes of workers, facilities for legal aid to poor litigants were provided, the State Housing Scheme was extended, a Fair Rents' Court was constituted, and through private subscriptions large funds were established for the care of soldiers and their dependents.

#### 1921—

The remarkable boom in trade and commerce which followed closely upon the termination of the war showed signs of collapsing in New South Wales some months after the fall of prices had set in overseas. The resultant reversal of economic fortunes dominated all issues, and industrial and political problems centred around the re-adjustments necessary to meet the altered conditions. These problems were complicated by the stagnation of trade and industry with the resultant unemployment. But although the problem of the workless became so acute that frequent demonstrations were made and extensive relief was given, at no period was unemployment so widespread as in older countries. Industrial conferences were held—some proved abortive through conflict of fundamental principles of the conferring parties, while others suggested the usual remedy of opening Government relief works, but this course was prevented by financial stringency.

During the early part of the depression movements begun in more prosperous times were continued to maintain and even improve working conditions. During 1921 the working week in many trades was reduced to forty-four hours after exhaustive inquiries, and in October, 1921, the living wage, which a year earlier had been declared at £4 5s., was reduced to £4 2s., but the Government refused to put the reduction into operation, and considerable controversy was aroused.

In December, 1921, a constitutional crisis was precipitated by the resignation of the Speaker, and as an outcome the Labour Government was defeated after

holding office for two years; at the general election of March, 1922, a Nationalist majority was returned. These elections were conducted under the system of proportional representation. Large numbers of candidates again presented themselves, and a new political group appeared—the Country Party—which gained a number of seats. This party had appeared already in the elections of 1920 as Progressives and in the Federal elections of 1919. It had associated itself with movements for formation of separate political units in the northern and southern parts of the State, and had conducted much propaganda on behalf of country interests.

With the reversal of the state of parties at the elections, extensive changes of policy were made. Economy in administration, enforcement of the reduced living wage, reversion to a forty-eight hour week, modification of industrial arbitration, and the abolition of restrictions on trade and industry became features in the policy of the Government. The problem of land settlement was subjected to considerable investigation, and activity in immigration was revived.

As the year 1922 progressed signs of a revival of trade became more evident. The market for wool recovered from its temporary depression, and very favourable prices were realised. The seasons had improved, large quantities of wheat and butter were exported at remunerative prices, industry at home and abroad began to resume its normal course and unemployment decreased, although a number of large manufacturing establishments remained closed.

Steps were taken in 1922 to introduce a measure of law reform whereby effete laws were removed from the Statute Book. The extent of arbitration rights was restricted, so that rural workers and civil servants were removed from the jurisdiction of the Arbitration Courts. The education system was modified by remodelling the examinations and imposing fees upon admission to certain secondary schools, and the number of applicants for secondary education declined considerably.



## CONSTITUTION AND GOVERNMENT.

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THERE are in New South Wales three administrations—the Federal, which meets in Melbourne (Victoria), and controls matters affecting the interests of Australia as a whole; the State, which meets in Sydney and deals with the more important questions of State and local interest; and the Local Government bodies, whose headquarters are at convenient centres within their areas, in which they control matters of purely local concern—these areas extend over nearly two-thirds of the State.

The State Government is the oldest, dating in its present form from 1856. Its constitution was modified in 1901, when the Federal Government was established, and in 1906, when Local Government was extended over its present area.

### *Early Forms of Government.*

A brief account of the early forms of government in New South Wales and of the introduction of the existing system was published in the Year Book for 1921, at page 25. An account of the Commonwealth Government may be found in the same edition at page 38.

### PRESENT SYSTEM OF STATE GOVERNMENT.

The Constitution of New South Wales is not framed completely in the Constitution Act of 1902, and is not entirely written. It is drawn from seven diverse sources, comprising certain Imperial statutes, such as the Colonial Laws Validity Act (1865) and the Commonwealth of Australia Constitution Act (1900); the Letters Patent and the Instructions to the Governor; an element of inherited English law; some Federal statutes; sundry State statutes; a large number of legal decisions; and a large element of English and local convention.

The Imperial Parliament is legally omnipotent in local as well as in Imperial affairs, and it may exercise effective control over the affairs of the State by direct legislation and some indirect control through the Secretary of State for the Colonies, by whom the Governor is directed in the exercise of his powers. Imperial legislation forms the basis of the existing Constitution, and the Imperial Parliament regulates all matters of Imperial concern in addition to controlling the extensive powers which remain vested in the Crown by virtue of its prerogative. These include such important matters as foreign relations in peace and war, and control of the forces. In local affairs the prerogatives of the Crown are generally exercised by the Governor on the advice of the Executive Council, but where Imperial interests are involved the prerogative powers are exercised through the medium of the Privy Council, the Secretary of State for the Colonies, and the Governor.

### *The Governor.*

In New South Wales the position of the Governor is primarily that of local representative of the Crown, and through him the powers of the Crown in matters of local concern are exercised. In addition he is titular head of the Government of New South Wales; he possesses powers similar to those of a constitutional sovereign, and he performs those formal and ceremonial functions which attach to the Crown in its august capacity.

His constitutional functions are defined and regulated partly by various statutes, which from time to time cast new duties upon him, partly by the Letters Patent constituting his office and partly by the Instructions to the Governor. The Letters Patent and Instructions were given under the Royal Sign Manual in 1900, and amended in 1909. These functions cover a wide range of important duties, but it is directed that "in the execution of the powers and authorities vested in him the Governor shall be guided by the advice of the Executive Council." He may, if he sees sufficient cause, dissent from the opinion of the Council and refer the matter to the Imperial authorities through the Secretary of State for the Colonies. The extent of the Governor's discretionary powers, however, tends more and more to contract, though he still possesses important spheres of independent action, such as in granting dissolution of Parliament and in making appointments to the Legislative Council. He is, moreover, entitled to full information on all matters to which his assent is sought, and in this way he may exercise a general supervision over his officers, and use his personal influence for the good of the State. The general nature of his position is such that he is guardian of the Constitution and bound to see that the great powers with which he is entrusted are not used otherwise than in the public interest. In extreme cases his discretion constitutes a safeguard against malpractice. His more important constitutional duties are to appoint the Executive Council and to preside over its deliberations; to summon, prorogue, and dissolve the Legislature; to assent, to refuse to assent, or to reserve bills passed by the Legislature; to appoint members of the Legislative Council; to keep and use the Public Seal of the State; to appoint all ministers and officers of State; and, in proper cases, to remove and suspend officers of State. He exercises the King's prerogative of mercy, but only on the advice of the Executive Council, in capital cases, and of a Minister of the Crown in other cases.

With respect to responsibility for his actions the Governor does not occupy the same position as the King. He is amenable to the law; and, although the State accepts responsibility for his official acts, he is personally liable for his unofficial actions, civil and criminal. Politically he is indirectly responsible to the Imperial Parliament through the Secretary of State for the Colonies, but in State politics his Ministers take the responsibility for the advice they give, on which he acts. However, in an extreme case where good reason existed the local Legislature would probably be justified in asking for his removal.

The Governor's normal term of office is five years, at a salary of £5,000 per annum, with certain allowances for his staff, provided by the Constitution Act out of the revenues of the State.

The periods for which the Governor may absent himself from the State are limited by the Instructions. When he is absent the Lieutenant-Governor acts in his stead in all matters of State. For that purpose the Chief Justice is usually appointed. In the event of the Lieutenant-Governor not being available to fill the Governor's position, an Administrator assumes office under a dormant Commission appointing the Senior Judge of the State as Administrator.

#### *The Executive.*

All important acts of State are performed or sanctioned by the Governor-in-Council, and, except in the limited spheres where the Governor possesses discretionary powers, he is required, in matters of local concern, to act on the advice of the Executive Council or of a Minister of the Crown.

The Council is established by virtue of the Letters Patent constituting the office of Governor, and it is composed of such persons as the Governor

is pleased to appoint. Its members are invariably members of the Ministry formed by the leader of the dominant party in the Legislative Assembly. When a member resigns from the Ministry he also resigns from the Executive Council, otherwise he may be dismissed by the Governor.

The Executive Council meets only when summoned by the Governor, who is required by his Instructions to preside over its deliberations unless absent for "some necessary or reasonable cause." In his absence the permanent Vice-President presides.

### *The Ministry or Cabinet.*

In New South Wales the terms "Ministry" and "Cabinet" are synonymous, since both bodies by custom consist of those members of Parliament chosen to administer departments of State, and to perform other executive functions. The Ministry is answerable to Parliament for its administration, and it continues in office only so long as it commands the confidence of the Legislative Assembly, from which practically all its members are chosen. An adverse vote in the Legislative Council does not affect the life of the Ministry. The constitutional practices of the Imperial Parliament with respect to the appointment and resignation of Ministers have been adopted tacitly with some minor modifications. Cabinet acts in a similar way to the English Cabinet under direction of the Premier, who supervises the general legislative and administrative policy and makes all communications to the Governor.

Frequent meetings of Cabinet are held to deliberate upon the general policy of the administration, all the more important business matters of the State, the legislative measures to be introduced to Parliament, and to manage the financial business of the State. Its decisions are carried into effect by the Executive Council or by individual Ministers as the case requires.

Administrative matters of minor importance are determined by ministerial heads of departments without reference to the Executive Council, and every Minister possesses considerable discretionary powers in the ordinary affairs of his department.

The present members of the Ministry, which assumed office on 13th April, 1922, are as follow:—

Premier—The Hon. Sir G. W. Fuller, K.C.M.G., M.L.A.

Vice-President of the Executive Council—The Hon. Sir J. H. Carruthers, K.C.M.G., LL.D., M.L.C.

Secretary for Lands and Minister for Forests—The Hon. W. E. Wearne, M.L.A.

Colonial Secretary and Minister for Public Health—The Hon. C. W. Oakes, C.M.G., M.L.A.

Attorney-General—The Hon. T. R. Bavin, M.L.A.

Colonial Treasurer—The Hon. A. A. C. Cocks, M.L.A.

Secretary for Public Works and Minister for Railways and State Industrial Enterprises—The Hon. R. T. Ball, M.L.A.

Minister for Agriculture—Captain the Hon. F. A. Chaffey, M.L.A.

Minister of Public Instruction—The Hon. A. Bruntnell, M.L.A.

Secretary for Mines and Minister for Local Government—The Hon. J. C. L. Fitzpatrick, M.L.A.

Minister of Justice—The Hon. T. J. Ley, M.L.A.

Minister for Labour and Industry—The Hon. E. H. Farrar, M.L.C.

The salaries payable annually to members of the Cabinet as from 1st July, 1922, were fixed as follows by the Parliamentary Allowances and Salaries Act, 1922:—

	£
The Premier .. .. .	2,000
The Attorney-General .. .. .	1,600
The Vice-President of the Executive Council (and leader of the Government in the Legislative Council) .. .. .	900
Nine other Ministers of the Crown, £1,500 each .. .. .	13,500
Total .. .. .	£18,000

These amounts are inclusive of the allowance of £600 per annum paid to ordinary members.

#### THE STATE LEGISLATURE.

The State Legislature consists of the Crown and two Houses of Parliament, and all State laws are enacted "by the King's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and the Legislative Assembly in Parliament assembled." It exercises a general power of legislation, and possesses plenary and not delegated authority. The Constitution Act of 1902 provides that "the Legislature shall, subject to the provisions of the Commonwealth of Australia Constitution Act, have power to make laws for the peace, welfare, and good government of New South Wales in all cases whatsoever." It is a constituent body; it can delegate its powers, and within its territory its actions are restricted only by legislation of the Imperial Parliament made to apply to New South Wales, and by valid Federal enactments.

The two Houses of Parliament are the Legislative Council (or Upper House), and the Legislative Assembly (or Lower House). Their powers are nominally co-ordinate, but it is provided that bills appropriating money or imposing taxation and bills affecting itself must originate in the Legislative Assembly, which is the elective Chamber, and which, it is recognised, must control taxation and expenditure. However, bills involving money matters may be introduced only by a Minister on the recommendation of the Governor, and in this way the responsibility of the Ministry for financial measures is secured.

Every member of Parliament must take an oath or make an affirmation of allegiance.

By virtue of the Constitution Act it is a function of the Governor to summon, prorogue, and dissolve both Houses of Parliament, but it is provided that both Houses shall meet at least once in every year, so that a period of twelve months shall not elapse between sessions. The continuity of Parliament is ensured by the Parliamentary Electorates and Elections Act, 1912 (as amended in 1918), which provides that writs for the election of new members must be issued within four days after the dissolution of the Legislative Assembly, that they must be returned within sixty days after issue (unless otherwise directed by the Governor), and that Parliament shall meet within seven days of the return of writs. The duration of Parliament was limited to three years in 1874.

It is agreed tacitly that the procedure in each House shall be conducted according to its prototype in the Imperial Parliament, but comprehensive Standing Orders regulating the business of each House have been drawn up. When a disagreement arises between the two Houses each appoints "managers" to confer upon the matters in dispute. There is no provision to meet a deadlock other than by dissolution of the Legislative Assembly,

which may be granted by the Governor. The new Legislative Assembly is regarded as representing the will of the people; and the overwhelming opinion is that the Legislative Council should recognise it.

Much interest and some controversy centres around the powers of the Governor in granting a dissolution of Parliament. Strictly speaking only the Legislative Assembly is dissolved, but Parliament is thereby ended, because both Houses are necessary to constitute a Parliament. There are two main cases in which a dissolution may be granted in addition to that mentioned above; they arise when, on a question of policy, the Ministry sustains an adverse vote in the Legislative Assembly, and when the Legislative Assembly becomes factious, or will not form a stable administration.

#### *The Legislative Council.*

The Legislative Council is a nominee Chamber consisting of a variable number of members appointed for life without remuneration. The Governor at his discretion may summon any person to the Legislative Council, provided that such person is of the full age of 21 years, and is a natural-born subject of his Majesty or naturalised in Great Britain or in New South Wales. In making appointments the Governor acts ordinarily on the advice of the Executive Council, but he may at his discretion refuse to make appointments. Not more than one-fifth of the members summoned to the Council may be persons holding office of emolument under the Crown. The seats of members become vacant by death, resignation, absence, accepting foreign allegiance, bankruptcy, accepting public contracts, or by criminal conviction. The presence of one-fourth of the members, exclusive of the President, is necessary to form a quorum for the despatch of business. The lowest number of members during the past twenty years was fifty-one in 1911. In 1917 there were seventy-one members of the Council, and this number was not exceeded until 1921, when sixteen new appointments were made, and the total membership on 31st December, 1922, was eighty-one.

The Council is presided over by a permanent President appointed from among the members by the Governor. He receives an annual salary of £925. There is also a Chairman of Committees, who receives a salary of £500 per annum. As a matter of privilege all members of the Legislative Council and of the Legislative Assembly are allowed to travel free on State railways and tramways.

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#### *The Legislative Assembly.*

The Legislative Assembly is the elective or popular House of Parliament, and has most to do with the Government of the country. By its power over supply it ultimately controls the Executive. It consists of ninety members elected on a system of universal adult suffrage for a period of three years, unless Parliament is dissolved previously. Any person who is enrolled as an elector of the State is eligible to be elected to the Legislative Assembly, except persons who are members of the Federal Legislature or of the Legislative Council, or who hold non-political offices of profit under the Crown, other than in the army or navy. It was provided in 1916 that any officer of the public service of New South Wales may be elected to the Legislative Assembly on condition that he forthwith resign his position in the service. At the close of 1918 all legal impediments to the election of women to the Legislative Assembly were removed. Several women have since contested seats at the elections, but none has been elected. The seat of a member becomes vacant in similar cases to those stated above for Legislative Councillors.

The House is presided over by a Speaker, whose election is the first business of the House when it meets after election. His functions are most

important. He presides over debate, maintains order, represents the House officially, communicates its wishes and resolutions, defends its privileges when necessary, and determines its procedure. There is also a Chairman of Committees elected by the House at the beginning of each session. He presides over all deliberations of the House in Committee of the Whole, and acts as Deputy-Speaker.

Payment of members of the Legislative Assembly is determined by Parliament and was first made as from 21st September, 1889. The amount originally fixed was £300 per annum, but this was increased to £500 by an Act assented to on 17th September, 1912, further increased to £875 as from 1st November, 1920, after inquiry and report by a Judge of the Court of Industrial Arbitration, and reduced to £600 as from 1st July, 1922. An amount of £2,700 is provided for postage, each member receiving an order monthly for one-twelfth of the annual allowance. The Speaker's salary is £1,400, and that of the Chairman of Committees £840 per annum, while, since 1912, the leader of the Opposition has received an annual allowance of £250 in addition to his allowance as member.

#### STATE PARLIAMENTARY COMMITTEES.

A number of committees consisting of members of Parliament are appointed to deal with special matters connected with the business of the country and of either House; from time to time select committees are chosen to inquire into and report on specific matters for the information of Parliament and the public. Each House elects a committee to deal with its Standing Orders and printing and a joint committee to supervise the library. In addition there are the more important committees described below.

##### *Committees of Supply and of Ways and Means.*

These committees consist by custom of the whole of the members of the Legislative Assembly, and they deal with all money matters. The Committee of Supply debates and determines the nature and amount of the expenditure, and the Committee of Ways and Means debates and authorises the issue of these sums from the Consolidated Revenue Fund and frames the resolutions on which taxing proposals are based.

##### *Parliamentary Standing Committee on Public Works.*

As soon as practicable after the commencement of the first session of every Parliament, a joint committee of members of the Legislative Council and Legislative Assembly, called the Parliamentary Standing Committee on Public Works, is appointed by ballot. This Committee consists of three members of the Legislative Council and four members of the Legislative Assembly, and has power, under the Public Works Act, to prosecute inquiries, to summon witnesses, and to compel the production of books, etc.

The Chairman receives by way of remuneration £3 3s. for each sitting of the Committee, and the other members £2 2s. each.

Proposals for public works of an estimated cost exceeding £25,000 must be submitted and explained by a Minister in the Legislative Assembly, and then referred to the Public Works Committee for report.

##### *Public Accounts Committee.*

For the better supervision of the financial business of the State a Public Accounts Committee is appointed every session under provision of the Audit Act, 1902, from among the members of the Legislative Assembly. It consists of five members, and is clothed with full powers of inquiry into any



question arising in connection with the public accounts and upon all expenditure by a Minister of the Crown made without Parliamentary sanction. It reports on these matters to the Legislative Assembly.

*Committee of Elections and Qualifications.*

Within seven days of his election the Speaker is required by the Parliamentary Electorates and Elections Act, 1912, to select nine members of the Legislative Assembly to act on the Committee of Elections and Qualifications. His choice is subject to the approval of the House. The Committee is clothed with judicial powers, and each member is required to take an oath of impartiality. Its business is to inquire into and determine all matters connected with the election petitions and all questions referred to it by the Legislative Assembly concerning the validity of any election or the return of any member, and questions involving the qualifications of members.

Its decisions\* on all matters are final, but it must report to the House.

*Commissions and Trusts.*

In addition to the Ministerial Departments, various public services are administered by Commissions, Boards, and Trusts; the more important of these are—

- Railway Commissioners for New South Wales.
- Metropolitan Board of Water Supply and Sewerage.
- Hunter District Water Supply and Sewerage Board.
- Sydney Harbour Trust Commissioners.
- Water Conservation and Irrigation Commission.
- Housing Board.
- Commissioners of the Government Savings Bank of New South Wales.
- Board of Fire Commissioners of New South Wales.
- Metropolitan Meat Industry Board.
- Forestry Commission.
- Western Land Board.

In each case the authority controls a specific service, and administers the statute law in relation to it. The State Industrial Undertakings are controlled by managers subject to the general oversight of a member of the Cabinet.

*Auditor-General.*

The office of Auditor-General is the real security that public moneys will be collected and expended in accordance with the wishes of Parliament.

The Auditor-General is appointed by the Governor, and holds office during good behaviour. In certain cases he may be suspended by the Governor, but he is removable from office only on an address from both Houses of Parliament. He is required to take an oath that he will faithfully perform his duties, and he is debarred from entering political life. He is endowed with wide powers of supervision, inspection, and audit, with regard to the collection and expenditure of public moneys and the manner in which the public accounts are kept. He exercises control over the issue of public moneys, and all warrants must be countersigned by him. Matters connected with the public accounts are subject to special or annual report to Parliament by him, and he may refer any matter to the Public Accounts Committee.

STATE ELECTORAL SYSTEM.

Members of the Legislative Assembly are elected by secret ballot. Adult British subjects, men and women, are qualified for enrolment as electors

when they have resided in the Commonwealth for a period of six months, in the State for three months, and in the Electoral District for one month prior to the issue of the writs for the election. Persons are disqualified from voting who are of unsound mind, a charge on public charity, criminals, disorderly persons, or defaulters from justice. Each elector is entitled to one vote only. The electoral lists are compiled annually under provisions for compulsory enrolment and revised before a special court under the presidency of a Stipendiary or Police Magistrate.

Electors absent from their districts may record their votes at any polling-place in the State, and postal voting is allowed in the case of persons precluded from attendance at any polling-place by reason of illness or infirmity, distance over 15 miles, or travelling.

At general elections polling is conducted on the same day in all electorates. Polling day is a public holiday from noon, and during the hours of polling (8 a.m. to 8 p.m.) all hotels are closed.

The following table shows the voting at the elections held in New South Wales since the general election in 1894, when a system based on single electorates and the principle of "one man one vote" was introduced:—

Year of Election.	Total number of Voters on Roll.	Electors per Member.	Total Members returned.	Members unopposed.	Contested Electorates.				
					Electors on Roll.	Votes Recorded.	Percent- age of Votes Recorded.	Informal Votes.	Percent- age of Informal Votes.
1894—Males ...	298,817	2,390	125	1	254,105	204,246	80·38	3,310	1·62
1895—Males ...	267,458	2,139	125	8	238,233	153,034	64·24	1,354	·88
1898—Males ...	324,339	2,595	125	3	294,481	178,717	60·69	1,638	·92
1901—Males ...	346,184	2,769	125	13	270,861	195,359	72·13	1,534	·79
1904 {	Males ...	363,062	...	...	304,396	226,057	74·26	3,973	·99
	Females...	326,428	...	...	262,433	174,538	66·51		
	Total ...	689,490	7,661	90	2	566,829	400,595		
1907 {	Males ...	392,845	...	...	370,715	267,301	72·10	13,543	2·87
	Females ..	353,055	...	...	336,680	204,650	60·78		
	Total ...	745,900	8,288	90	5	707,395	471,951		
1910 {	Males ...	458,626	...	...	444,242	322,199	72·53	10,393	1·78
	Females...	409,069	...	...	400,139	262,154	65·52		
	Total ...	867,695	9,641	90	3	844,381	584,353		
1913 {	Males ...	553,633	...	...	534,379	385,838	72·20	14,439	2·10
	Females...	484,366	...	...	468,437	302,389	64·55		
	Total ...	1,037,999	11,533	90	3	1,002,816	688,227		
1917 {	Males ...	574,308	...	...	525,681	328,030	62·40	5,844	·94
	Females...	535,522	...	...	487,585	295,354	60·57		
	Total ...	1,109,830	12,331	90	8	1,013,266	623,384		
1920 {	Males ...	593,244	...	...	593,244	363,115	61·21	62,900	9·70
	Females...	561,193	...	...	561,193	285,594	50·89		
	Total ...	1,154,437	12,827	90	...	1,154,437	648,709		
1922 {	Males ...	636,662	...	...	636,662	466,949	73·34	31,771	3·63
	Females...	614,361	...	...	614,361	408,515	66·49		
	Total ...	1,251,023	13,900	90	...	1,251,023	875,464	69·98	

The analysis shown above indicates that the percentage of electors who fail to record their votes is large, even if due allowance is made for obstacles to voting, especially in sparsely settled districts. The highest proportion of votes to enrolment, 80·4 per cent., was recorded in 1894, when there was a strenuous contest on the question of fiscal reform; and the lowest proportion, 56·2 per cent., was recorded in 1920, the first elections under the system of proportional representation, of which further particulars are given below.

The number of women who exercise their right to vote has always been less, relatively and absolutely, than the number of men. At the first elections after enfranchisement 66 per cent. of the women enrolled recorded votes, then the proportion declined. In 1910, when a Labour Government was placed in office for the first time in the State Parliament, and in 1913, the proportion of women who voted was about 65 per cent.; in 1920 it was less than 51 per cent., but in 1922 it was practically the same as in 1904.

It is noteworthy that, whereas at the elections of 1910 and previous years a greater proportion of electors enrolled recorded their votes at State than at Federal elections, the proportion has, since 1913, been greater at Federal than at State elections, viz.:—1913, Federal 69·28 per cent., State 68·63 per cent.; 1917, Federal 71·17 per cent., State 61·54 per cent.; 1919, Federal 66·97 per cent., State (1920) 56·21 per cent. The change was due doubtless to the dominance of war issues, for the proportion of votes cast at the State elections of 1922 rose to 69·98 per cent. as against a decline to 56·70 at the Federal elections of that year.

The number of informal votes at elections in New South Wales has fluctuated very greatly, but until 1920 the proportion was usually less at State than at Federal elections.

#### *Proportional Representation.*

In 1918 an Act was passed to introduce a system of proportional representation in respect of the State Parliamentary elections. Formerly the State was divided into ninety electoral districts, containing approximately equal numbers of electors, and each district returned one member. Under the new system the number of members remained at ninety, and twenty-four electoral districts were constituted; eight constituencies in the metropolitan area, and the City of Newcastle, are represented by five members each, and fifteen districts return three members each. Casual vacancies are filled by the unsuccessful candidate of the same constituency who represented the same party interest as the late member and whose count of primary preference votes was next highest at the last general election. Where such a candidate is not available, the leader of the party concerned nominates a successor.

There have been two general elections under the proportional representation system. At the first, in 1920, the electors were required to record a preference for every name on the ballot-paper, and failure to comply with this provision was the cause of an abnormally large number of informal votes, especially in districts where the number of candidates was high. It was prescribed also that each voter should sign a statutory declaration before obtaining a ballot-paper. The complexity of the method of voting under these conditions apparently induced a large number of electors to refrain from voting and the polling was proportionately the smallest since plural voting was abolished. At the elections in 1922 the method was simplified; the recording of preferences was made compulsory only to the extent of the number of candidates to be elected, and the statutory declaration was abolished. The proportion of voters to enrolment was greater at the elections in 1922 than it had been at recent elections under the system of single-member electorates. It is probable that provision for compulsory enrolment and the simplification of the method of voting contributed to this result, though there is little doubt that the main factor which influences the size of the polling is the intensity of interest in party issues.

The extent to which the objective of the system of proportional representation, *i.e.*, representation in proportion to numerical strength, was realised at the elections in 1920 and 1922 is indicated by the figures in the following

statement. It shows the number of first preference votes recorded for each political party out of every ninety votes polled, in comparison with the number of each party's candidates who were elected:—

Party.	1920.		1922.	
	Valid Votes. Ratio to 90.	Members elected.	Valid Votes. Ratio to 90.	Members elected.
Nationalist ... ..	26.9	28	39.2	42
„ Independent ... ..	.9	1	1.0	1
Labour... ..	38.8	43	34.1	36
„ Independent... ..	1.6	2	2.7	1
„ Socialist ... ..	.3	...	...	...
Progressive or Country ... ..	13.9	15	8.7	9
Democratic ... ..	2.6	...	1.5	1
Soldiers and Citizens ... ..	1.5	...	...	...
Independent Candidates ... ..	3.5	1	2.8	...
Total ... ..	90	90	90	90

The parties quoted in the above table are given as the candidates were described in the newspapers at the time of the elections.

It would have been interesting to compare, on the same basis, the results of the elections in 1917—when each electorate returned one member only—but there are several difficulties in the way.

On that occasion eighty-two electorates only were contested—eight members being returned unopposed—and there were eight second ballots in electorates where the candidate who was leading on the first ballot failed to secure an absolute majority of the votes polled.

In 1920, candidates were nominated in all the electorates in the interests of the Nationalist and the Labour parties; Independent Nationalist candidates contested seats in two electorates, Independent Labour three, Socialist Labour four, Progressive nineteen, Democratic nine, and Soldiers and Citizens' party candidates in ten electorates. In nineteen districts there was at least one candidate who was not allied to any of the specified sectional interests, such persons being classified under the category "Independent." At the elections in that year the number of successful candidates belonging to the Labour party was greatly in excess of the party's quota of the first preference votes, as forty-three Labour members were elected, although they received only thirty-nine out of every ninety votes polled. If votes are included which were recorded for Independent Labour candidates, who advocated similar principles but were not formally attached to the party organisation, the ratio of votes was 40.4 and the number of successful candidates forty-five. An excess of representation equal to one member each was gained by the Nationalist and Progressive organisations. Democratic candidates received 2.6 per ninety votes and Soldiers and Citizens 1.5, but neither party had representation in Parliament.

Before the elections of 1922 a number of members belonging to the Progressive party formed a coalition with the Nationalists and there were Coalition-Nationalist and Labour candidates in all districts, Independent Nationalists in three, Independent Labour in five, Progressive or Country party candidates in fifteen districts, and Democratic in four districts. An excess of membership was gained at the elections by the Nationalist interests, viz., forty-two members, as compared with first preference votes in a ratio of forty to ninety. The representation gained by the other defined groups

was approximately proportional to the votes, assuming that Labour and Independent Labour candidates represented similar interests. Votes in the ratio of 2·8 to ninety were recorded for Independent candidates, but none was elected.

The extent to which first preference votes were effective in electing candidates at the general elections under proportional representation is indicated in the following statement which shows the proportion of the first preference votes recorded for elected candidates, in relation to the total valid votes in each electorate in 1920 and in 1922:—

Electoral District.	1920.				1922.			
	Number of Candidates.	Valid Votes Polled.	Effective First Preference Votes.		Number of Candidates.	Valid Votes Polled.	Effective First Preference Votes.	
		Number.	Number.	Proportion per cent. of Valid Votes.		Number.	Number.	Proportion per cent. of Valid Votes.
<i>Five-Member Districts—</i>								
Balmain ... ..	19	30,878	16,457	53·3	14	44,277	29,054	65·6
Botany ... ..	19	28,490	21,195	74·4	15	44,785	30,912	69·0
Eastern Suburbs ... ..	18	29,622	17,124	57·8	23	51,216	31,008	60·5
Newcastle ... ..	19	32,848	21,702	66·1	17	52,126	30,484	58·5
North Shore ... ..	21	31,260	16,792	53·7	16	50,734	33,456	65·9
Ryde ... ..	19	32,061	18,751	58·5	13	56,720	37,236	65·6
St. George ... ..	15	33,410	20,103	60·2	17	52,989	37,619	71·0
Sydney... ..	20	25,341	15,778	62·3	25	38,102	23,535	61·8
Western Suburbs ... ..	20	32,350	18,178	56·1	12	49,640	38,524	77·6
Total Five-Member Districts ...	170	276,290	166,080	60·1	152	440,589	291,828	66·2
<i>Three-Member Districts—</i>								
Bathurst ... ..	8	23,646	17,048	72·1	10	29,401	18,510	63·0
Byron ... ..	12	20,409	12,191	59·7	9	30,094	17,421	57·9
Cootamundra ... ..	8	25,297	16,187	64·0	10	27,705	17,801	64·3
Cumberland ... ..	11	18,617	10,977	59·0	8	29,090	21,247	73·0
Goulburn ... ..	12	20,152	11,381	56·5	10	25,706	14,741	57·3
Maitland ... ..	11	19,294	8,820	45·7	10	27,451	17,057	62·1
Murray... ..	7	19,832	12,600	63·5	9	24,644	15,367	62·4
Murrumbidgee ... ..	11	21,064	9,633	45·7	11	25,285	16,356	64·7
Namoi ... ..	9	21,724	11,524	53·0	8	25,931	17,669	68·1
Northern Tableland ... ..	9	19,411	11,355	58·5	9	23,274	15,131	65·0
Oxley ... ..	9	19,088	12,987	68·0	14	30,534	11,992	39·3
Parramatta ... ..	10	20,474	10,715	52·3	10	31,345	16,528	52·7
Sturt ... ..	9	15,829	11,672	73·7	11	17,480	9,694	55·5
Wammerawa ... ..	11	22,438	12,914	57·6	14	26,280	12,317	46·9
Wollondilly ... ..	6	22,244	12,880	57·9	8	28,884	17,673	61·2
Total Three-Member Districts ...	143	309,519	182,884	59·1	151	403,104	239,504	59·4
Total All Districts ...	313	585,809	348,964	59·6	303	843,693	531,332	63·0

The proportion of effective first preference votes is influenced largely by the number of candidates and by the number of parties participating in the contest for seats; local factors also affect the results.

The polling was much heavier in 1922 than in 1920, but the voting was generally more concentrated in regard to candidates, since the proportion of effective first preference votes to valid votes rose from 59·6 per cent. in 1920 to 63 per cent. in 1922. The increased concentration was more marked

in the urban or five-member districts, where the number of candidates was smaller, except in three districts, and fewer parties were active, owing to the coalition of Nationalists and Progressives and the absence of Soldiers and Citizens' candidates, whose efforts to gain direct representation in 1920 had been made in districts in and around the metropolis. Exceptions to the general trend towards increased concentration occurred in Botany, Newcastle, and Sydney, where the proportion of effective first preference votes decreased, showing a wider allotment of the votes among candidates.

In rural or three-member constituencies the proportion of effective first preference votes to valid votes rose slightly, indicating an increased intensity in the contest between prominent candidates, who were generally party representatives; but there were exceptions, notably in Oxley, Sturt, and Wammerawa.

#### *Distribution of Electorates.*

After the Federation of the Australian States the question of again reducing the membership of the Legislative Assembly, which had been reduced from 141 to 125 in 1894, was submitted to the electors by referendum, and, as a result, the number of representatives was reduced to 90 in 1904.

The present Electoral Act provides that electorates are to be redistributed whenever directed by the Governor. In the event of there being no direction by the Governor, a distribution must take place on the expiration of nine years from the date of the last redistribution. The redistribution is made by a special commission of three persons appointed by the Governor from the Public Service of New South Wales.

The following table affords a very interesting summary of parliamentary government since the opening of the first Parliament. It shows at the various dates on which the membership of Parliament or the franchise was altered, and at election years since 1901 (*a*) the size of the elective Chamber, (*b*) the average number of persons in each constituency, and (*c*) the proportion of the population which had a voice in the government through possessing the right to vote. In this way it shows what effects constitutional changes have had on the representative nature of the Legislature.

Year of Election.	Number of Members of Legislative Assembly.	Population per Member.	Proportion per cent. of Number of Names on Rolls to Total Population.
1856	54	5,200	15·8
1858	72	4,500	22·3
1880	108	6,900	25·2
1885	122	7,800	24·5
1891	141	8,100	26·7
1894	125	9,800	24·3
1901	125	10,900	25·3
1904	90	15,900	48·3
1907	90	17,000	48·8
1910	90	18,200	53·3
1913	90	20,500	55·1
1917	90	21,000	58·5
1920	90	22,800	56·1
1922	90	23,800	58·5



After the revision of the electoral rolls (April to October, 1922) the number of names appearing thereon was 1,194,636, which bore a ratio of 55·6 per cent. to the total population at 30th June, 1922.

Adult male suffrage was introduced in 1858, and when women were permitted to vote practically the whole of the adult population were qualified electors. The expansion clauses of the Electoral Act of 1880 led to a rapid growth of the Legislative Assembly until it numbered 141 members in 1891, so that when it was limited to 125 members in 1894 and reduced to 90 in 1904 a rapid growth in the voting strength of the constituencies began. This growth will continue as the population of the State increases.

The number of distinct electors cannot be ascertained for any period prior to the year 1894, and the percentage of the population entitled to vote has been calculated on the total number of votes to which the electors on the roll were entitled; they are, therefore, somewhat in excess of the actual proportions.

#### *Parliaments.*

A list of the Parliaments since 1889, when payment of members was instituted, is shown below:—

Number of Parliament.	Date of Opening.			Date of Dissolution.			Duration.	Number of Sessions.
							yrs. mths. dys.	
14	27 Feb.	1889	...	6 June	1891	...	2 3 10	4
15	14 July	1891	...	25 June	1894	...	2 11 11	4
16	7 Aug.	1894	...	5 July	1895	...	0 10 28	1
17	13 Aug.	1895	...	8 July	1898	...	2 10 25	4
18	16 Aug.	1898	...	11 June	1901	...	2 9 26	5
19	23 July	1901	...	16 July	1904	...	2 11 23	4
20	23 Aug.	1904	...	12 July	1907	...	2 10 19	4
21	2 Oct.	1907	...	14 Sept.	1910	...	2 11 12	5
22	15 Nov.	1910	...	6 Nov.	1913	...	2 11 22	5
23	23 Dec.	1913	...	21 Feb.	1917	...	3 1 30	5
24	17 April	1917	...	18 Feb.	1920	...	2 10 8	4
25	27 April	1920	...	17 Feb.	1922	...	1 9 22	3
26	26 April	1922	...	Sitting*	...	...	...	...

\* 31st December, 1922.

On account of war conditions and the disturbed state of public affairs it was deemed advisable to extend the 23rd Parliament to a period exceeding the three years fixed by the Constitution Act, and the Legislative Assembly Continuance Act, 1916, was passed to provide for an extension from three years to four years. The Parliament, however, terminated after 3 years 1 month 30 days.

#### *State Ministries.*

The various Ministries which have held office since 1894, together with the duration in office of each, are shown below. The life of a Ministry is not

co-terminous with the life of a Parliament. In sixty-five years under the present system there have been forty Ministries, but only twenty-five Parliaments. Up to the 3rd August, 1894, twenty-seven Ministries had held office.

Number.	Ministry.				In Office.		Duration.		
	Name.				From—	To—			
28	Reid	...	...	...	3 Aug. 1894	13 Sept. 1899	yrs. mths. days.	5	1 11
29	Lyne	...	...	...	14 Sept. 1899	27 Mar. 1901		1	6 14
30	See	...	...	...	28 Mar. 1901	14 June 1904		3	2 18
31	Waddell	...	...	...	15 June 1904	29 Aug. 1904		0	2 15
32	Carruthers	...	...	...	30 Aug. 1904	1 Oct. 1907		3	1 2
33	Wade...	...	...	...	2 Oct. 1907	20 Oct. 1910		3	0 19
34	McGowen	...	...	...	21 Oct. 1910	29 June 1913		2	8 9
35	Holman	...	...	...	30 June 1913	15 Nov. 1916		3	4 16
36	Holman	...	...	...	16 Nov. 1916	11 April 1920		3	4 27
37	Storey	...	...	...	12 April 1920	9 Oct. 1921		1	5 28
38	Dooley	...	...	...	10 Oct. 1921	20 Dec. 1921		0	2 10
39	Fuller...	...	...	...	20 Dec. 1921	21 Dec. 1921		0	0 1
40	Dooley	...	...	...	21 Dec. 1921	13 April 1922		0	3 23
41	Fuller...	...	...	...	13 April 1922	In office.*		...	

\* 31st December, 1922.

#### COST OF STATE PARLIAMENTARY GOVERNMENT.

The following statement shows the cost of State Parliamentary Government in New South Wales during recent years. Expenses of Federal and Local Governments are not included:—

Head of Expenditure.				1910-11.	1915-16.	1919-20.	1920-21.	1921-22.
Governor—				£	£	£	£	£
Governor's Salary	...	...	...	5,000	5,000	5,000	5,000	5,000
Official Secretary	...	...	...	335	400	440	536	687
Clerk	...	...	...	...	...	259	305	391
Private Secretary	...	...	...	350	350	...	...	...
Aide-de-Camp	...	...	...	350	350	...	...	...
Orderlies	...	...	...	728	796	267	290	320
Repairs and Maintenance of Residences	...	...	...	8,183	1,653	2,274	2,939	2,727
Miscellaneous	...	...	...	1,231	1,547	923	1,012	1,303
Total	...	...	£	16,177	10,096	9,163	10,082	10,428
Executive Council—								
Salaries of Officers...	...	...	...	279	...	250	317	473
Other Expenses	...	...	...	25	...	257	150	163
Total	...	...	£	304	...	507	467	636
Ministry—								
Salaries of Ministers	...	...	...	11,040	11,040	10,924	21,866	26,825
Other Expenses...	...	...	...	1,445	1,298	801	1,436	1,880
Total	...	...	£	12,485	12,338	11,725	23,302	28,705

Cost of State Parliamentary Government—*continued*.

Head of Expenditure.	1910-11.	1915-16.	1919-20.	1920-21.	1921-22.
Parliament—	£	£	£	£	£
The Legislative Council—					
Railway Passes ... ..	£ 5,810	6,070	10,430	12,455	14,924
The Legislative Assembly—					
Allowances to Members ... ..	22,423	40,335	37,392	57,819	67,612
Railway passes ... ..	10,860	10,387	13,821	16,398	17,346
Other Expenses (Postage Stamps, etc.)	1,583	1,770	1,836	2,752	3,258
	£ 34,866	52,492	53,049	76,969	88,216
Miscellaneous—					
Fees and expenses of Parliamentary					
Standing Committee on Public Works	5,529	6,225	...	2,957	5,082
Salaries of Officers and Staff ... ..	18,903	21,454	23,654	25,753	24,992
Printing ... ..	7,687	14,967	13,219	15,016	21,552
Hansard (including Salaries) ... ..	5,668	7,121	7,147	8,988	8,584
Library ... ..	795	677	874	775	911
Water, Power, Light, and Heat ... ..	504	575	630	565	560
Postage, Stores, and Stationery ... ..	887	947	1,169	1,702	1,528
Refreshment Rooms ... ..	465	} 3,339	} 2,215	} 1,856	} 13,807
Miscellaneous ... ..	564				
	£ 41,002	55,305	48,908	57,612	77,016
Total Parliament	£ 81,678	113,867	112,387	147,036	180,156
Electoral Office and Elections—					
Salaries ... ..	788	1,123	1,629	2,230	2,026
Elections, Printing of Electoral Rolls,					
Expenses of Electoral Registrars, and					
Contingencies ... ..	35,291	56,491*	82,084	27,437	69,914
Total ... ..	£ 36,079	57,614	83,713	29,667	71,940
Royal Commissions and Select Committees					
Fees, etc. ... ..	2,627	{ 4,114	{ 7,012	7,274	644
Miscellaneous ... ..	1,165				
Total ... ..	£ 3,792	4,114	18,599	19,480	29,507
GRAND TOTAL ... ..	£ 150,515	198,029	236,094	230,034	321,372
Per Head of Population ... ..	1s. 10d.	2s. 1d.	2s. 4d.	2s. 2d.	3s. 0d.

\* Includes £30,244 for Liquor Referendum.

The cost of Parliamentary Government in 1921-22 represents less than 2·3 per cent. of the governmental expenditure during that year, that is excluding expenditure on business undertakings. The corresponding ratio in 1910-11 was 2·6 per cent. In addition to the referendum taken in 1915-16, general elections were held in three of the years shown above, viz., 1910-11, 1919-20, and 1921-22, and the expenditure in those years was considerably increased thereby.

## THE COMMONWEALTH.

A detailed account of the inauguration of Federation and of the nature and functions of the Federal Parliament in their relation to the State was published in the Year Book for 1921 at pages 38-40 and 625.

The federation of the six Australian States was inaugurated formally on 1st January, 1901, for their mutual benefit in matters upon which it was

agreed joint action was desirable. The broad principles of Federation were:—The transfer of limited and defined powers of legislation to a Federal Parliament consisting of a Senate and a House of Representatives, the former being a revisory Chamber wherein the States are equally represented, and the latter, the principal Chamber, consisting of members elected from the States in proportion to their population; complete freedom of action for the State Parliaments in their own sphere; a High Court to determine the validity of legislation; and an effective method of amending the Constitution.

The numbers of representatives elected from the various States to the House of Representatives are as follow:—New South Wales, 28; Victoria, 20; Queensland, 10; South Australia, 7; Western Australia, 5; Tasmania, 5; while it has been provided that a representative of the Northern Territory may attend and participate in debates without having the right to vote.

#### FEDERAL ELECTORAL SYSTEM.

For the purpose of electing representatives to the Senate of the Federal Parliament, New South Wales is treated as one constituency, returning six members, each for six years, three of whom retire triennially. Its twenty-eight members of the House of Representatives are elected for three years from single-member constituencies under a system of preferential voting. Otherwise the electoral system is similar to that of the State.

An analysis of the voting at Senate elections in New South Wales since 1901 was published in the 1921 edition of this Year Book at page 40; the voting at elections of members of the House of Representatives from New South Wales has been as follows:—

Elections.	Electors Enrolled (Contested Divisions only).		Votes Recorded.		Informal Votes.		Percentage of Votes Recorded to Electors Enrolled.		
	Men.	Women.	Men.	Women.	Number.	Proportion per cent.	Men.	Women.	Total.
1901	315,962	...	215,105	...	4,070	1·70	68·08	...	68·08
1903	303,254	274,763	164,133	118,381	7,834	2·77	54·12	43·08	48·88
1906	363,723	314,777	216,150	141,227	11,705	3·28	59·43	44·87	52·67
1910	431,702	379,927	294,049	207,868	8,002	1·59	68·11	54·71	61·84
1913	554,028	482,159	405,152	312,703	22,262	3·10	73·13	64·85	69·28
1914	491,086	429,906	351,172	257,581	14,816	2·43	71·51	59·92	66·10
1917	484,854	447,437	370,618	292,925	19,874	2·98	76·44	65·47	71·17
1919	527,779	508,129	385,614	308,183	26,517	3·82	73·06	60·65	66·97
1922*	507,388	498,209	570,184		25,665	4·50	...	...	56·70

\* Preliminary—subject to revision.

The percentage of voters increased steadily at the elections during the period 1903-1913; the improvement was not continued in 1914, when the electoral contest was modified in consequence of the outbreak of war in Europe, but in 1917, when considerable political feeling was excited by the question of conscription, the percentage was the highest since the inauguration of the Commonwealth Parliament.

## FEDERAL REFERENDA.

Analyses of the voting on Federal questions submitted to referenda were shown in the 1921 edition of this Year Book at page 42.

## SEAT OF FEDERAL GOVERNMENT.

It is provided in the Commonwealth of Australia Constitution Act that the seat of Federal Government shall be within the State of New South Wales at a distance of not less than 100 miles from the City of Sydney, but that Parliament shall meet at Melbourne until such time as it meet at the Seat of Government. A site containing 912 square miles was chosen near Queanbeyan in 1908, and ceded to the Commonwealth in December, 1910.

The administration of the Capital Territory is conducted in accordance with the Seat of Government (Administration) Act and, until the Federal Parliament makes other provision, the Governor-General may issue ordinances having the force of law in the Territory unless disallowed by resolution of either House of Parliament. Laws hitherto in force in the Territory were retained except those relating to industrial arbitration, local government, water supply and sewerage, and those imposing rates and taxes other than duties on estates of deceased persons; they are administered by the State authorities. All revenue accrues to the Commonwealth, which repays the State for services such as education, police, etc. New licenses to retail intoxicating liquors are not granted, and existing licenses may be renewed for the same premises only. Crown lands in the Territory may not be sold or converted into freehold.

In 1913 the name "Canberra" was chosen for the Federal Capital City and the work of construction was inaugurated. In 1915 an additional area of 28 square miles at Jervis Bay was ceded to the Commonwealth for use as the seaport of Canberra.

Slow progress has been made with the work of construction, but in 1921 a Federal Capital Advisory Committee was appointed with a view to providing a scheme of works which would enable the early transfer of the Federal Parliament and Central Government offices to the chosen site. The scheme of works drawn up by the Committee and published in September, 1921, provided a programme of works costing £1,799,000, which would enable the transfer of the Government to Canberra in three years. The general principles of the scheme were approved by Cabinet. It was proposed that there should be provided from loan funds sums of £417,400, £688,500, and £693,100 in successive years, the total expenditure to be distributed as follows:—

	£
Buildings ... ..	993,000
Water, Sewerage and Drainage Systems ...	342,400
Telegraphs, Telephone and Wireless Installations	156,000
Roads, Bridges and Railways ... ..	106,600
Other ... ..	201,000
	<hr/>
	£1,799,000

For the twelve months ended 31st October, 1922, a sum of £200,000 was voted by Parliament for these works, and the programme of construction was modified considerably. Particulars of the progress of works to 30th June, 1922, are published in the Report of the Advisory Committee 1921-22.

## DEFENCE.

UPON the inauguration of the Commonwealth the duty of providing for the defence of Australia devolved upon the Federal Government, and the Parliament of the Commonwealth has paramount power, subject to Imperial approval, to legislate for the naval and military defence of Australia, and for the control of the forces to execute and maintain the Federal laws. The Constitution provides that the States may not raise or maintain forces, but enjoins the Commonwealth to protect every State against invasion, and, on the application of the Executive Government of the State, against domestic violence. It is provided in the Defence Act that the Citizen Forces may not be called out or utilised in connection with an industrial dispute.

A system of compulsory universal training for Home Defence was brought into operation on 1st January, 1911, whereby male citizens who are physically fit are required to undergo prescribed courses of training between the ages of 12 and 26 years.

Particulars of the period of training laid down and of the liability of citizens for service for Home Defence in time of war were published in the 1921 edition of this Year Book at page 44. Owing to financial stringency and the disarmament agreement between world powers, the course of training was modified considerably in 1921 and 1922.

### *Military Forces.*

The Commonwealth is organised for Defence purposes into six military districts, corresponding as far as practicable with the political divisions into States. The second military district represents the State of New South Wales, excepting the North Coast district, the Barrier district, which are attached to Queensland and South Australia respectively, and the Deniliquin, Moama, and Corowa districts attached to Victoria.

The following table shows the strength of the military forces of the Commonwealth on 30th June, 1922 :—

Classification.	Military District.						Total.
	1st. Queens- land.	2nd. New South Wales.	3rd. Victoria.	4th. South Australia.	5th. Western Australia.	6th. Tasmania.	
Permanently employed	136	494	381	69	103	55	1,238
Citizen Soldiers ..	11,786	39,395	35,811	11,610	5,433	3,760	107,795
Engineer and Railway Staff Corps ... ..	9	11	10	5	7	5	47
Unattached list of Officers ... ..	50	178	175	58	27	22	510
Reserve of Officers ...	1,371	4,143	3,777	1,121	965	400	11,777
Chaplains .. ..	62	50	58	25	33	22	250
Senior Cadets ... ..	11,963	38,843	28,537	9,755	6,198	3,701	98,997
Total ... ..	25,377	83,114	68,749	22,643	12,766	7,965	220,614



There were, in addition, approximately 48,000 members of the Army Reserve who had been on active service abroad with the Australian Expeditionary Forces.

#### JUNIOR CADETS.

Boys between the ages of 12 and 14 years who are physically fit are required to undergo training as Junior Cadets.

This training embraces physical training, elementary marching drill, and the attainment of a certain standard of efficiency in not less than one of the following subjects:—Miniature rifle shooting, swimming, running, in organised games, first aid. In schools in the naval training areas instruction is given also in mariners' compass and elementary signalling. The training is commenced on 1st July of the year in which the cadet reaches the age of 12 years and is conducted by school teachers, who are instructed for this purpose by a staff of instructors maintained by the Defence Department.

Junior Cadets are not required to register for training which is conducted as part of the school curriculum. During the year ended 30th June, 1922, there were 50,569 Junior Cadets in training, of whom 20,557 were in the 2nd Military District area of New South Wales.

#### SENIOR CADETS.

Boys are required to register for military training as Senior Cadets during January or February, and to commence training on 1st July of the year in which they reach the age of 14 years. After medical examination they are organised into naval or military units, and receive instruction in moral and mental training, physical training, recreational training, military training, comprising the elements of drill and musketry, and voluntary subjects, such as swimming, life-saving, first-aid, knotting and lashing, and other subjects suitable to boys, but are not required to attend camp. Since July, 1922, the training of Senior Cadets between the ages of 14 and 16 years has been suspended.

The total number of Senior Cadets in training in the Commonwealth during the year ended 30th June, 1922, was 98,997, of whom 38,843 were in the 2nd Military District area of New South Wales. Of the boys medically examined during the year before admission to the Senior Cadets, 92·6 per cent. were found physically fit; the proportion in the New South Wales district being 94·3.

#### CITIZEN FORCES.

On 1st July of the year in which the Senior Cadets reach the age of 18 years they are transferred, after medical examination, to the Citizen Forces. Until recently they were required to serve for seven years, and, except in the last year (when only one muster parade was necessary), the continuous training was seventeen days per annum for specialist and technical corps, and eight days per annum for other corps; but arrangements were made in the latter part of the year 1922 to limit the period of service to two years, and to reduce the annual training.

The number of the Citizen Forces in training on 30th June, 1922, was 107,795, of which 39,395 were in the Military District of New South Wales.

## NAVAL DEFENCE.

The Naval Defence of Australia was maintained by the Imperial Navy under agreement between the Imperial Government and the Governments of Australia and New Zealand until 1913, when the Imperial squadron was replaced by Australian war vessels.

The fleet of the Australian Navy consists of 1 battle cruiser, 4 light cruisers, 12 destroyers, and a parent ship, 6 submarines, 3 sloops, 2 fleet auxiliaries, 3 depôt ships, 4 minor vessels, and a boys' training ship. Of these, the following are in reserve :—1 battle cruiser, 1 light cruiser, 9 destroyers, 2 sloops, 6 submarines, 1 fleet auxiliary, 2 depôt ships, and 2 minor vessels.

The naval forces consist of permanent forces numbering, on 15th October 1922, 395 officers and 3,337 men, of whom about 75 per cent. of officers and 74 per cent. of men were Australians, the remainder being on loan from the Royal Navy.

Reserves of officers and men for the Royal Australian Navy are provided from four services :—

- (a) The Royal Australian Fleet Reserve. (Ratings who have completed periods of service.)
- (b) The Royal Australian Naval Reserve. (Officers permanently employed in the Mercantile Marine.)
- (c) Royal Australian Naval Reserve. (Compulsory trainees of Citizen Forces.)
- (d) Royal Australian Naval Volunteer Reserve. (Volunteers enrolled for service in any capacity in time of war or emergency.)

Junior officers of the Navy are trained at the Naval College, Jervis Bay, and junior seamen ratings are trained on the H M.A.S. "Tingira" at Sydney.

The general depôt of the Navy is at Westernport, Victoria, where the more advanced training of officers and men is conducted.

## EUROPEAN WAR.

The conduct of Australia's part in the European War (1914–1918) and the financial and military arrangements connected therewith were controlled exclusively by the Federal Government, and the State of New South Wales is, therefore, connected with it only as a part of the Commonwealth of Australia.

The following table shows the total cost of the war, and of repatriation, to Australia to 30th June, 1922, together with an estimate of the proportional cost to New South Wales on a population basis :—

	Expenditure from Loans.	Expenditure from Revenue.	Total Expenditure.
	£	£	£
Commonwealth—			
Total cost ... ..	342,806,083	135,339,406	78,145,489
New South Wales—			
Proportional cost ... ..	132,289,000	52,227,000	184,516,000
Cost per head of population ...	£61 11s. 1d.	£24 6s. 0d.	£85 17s. 1d.

The above statement does not take into account the cost of war gratuities—approximately £28,000,000—nor the additional indebtedness of £48,055,190 of the Commonwealth to the Imperial Government in respect of loans during and since the war.

The estimated expenditure on war and repatriation services of the Commonwealth during the year 1922-23 is £10,340,893 from loans; £29,465,141 from revenue; total £39,806,034.

Information as to the naval and military operations of Australia during the recent war, and particulars of enlistments and casualties, were published in the Official Year Book of New South Wales, 1920.

#### REPATRIATION.

Particulars of the measures taken by the Commonwealth to repatriate the soldiers and sailors who served abroad during the war, and of the efforts of private citizens to promote the wellbeing of returned soldiers and sailors and their dependents, will be found in Part "Social Condition" of this Year Book.

## PUBLIC FINANCE.

THE collection and expenditure of public moneys in New South Wales are controlled by four authorities, viz., the State and Commonwealth Governments, local governing bodies, such as Municipal and Shire Councils, and Boards, such as the Metropolitan and Hunter River District Water Supply and Sewerage Boards and the Sydney Harbour Trust, appointed by the State Government, with statutory authority to administer public services.

Prior to Federation about two-thirds of the revenue of the State Government from taxation consisted of Customs and Excise duties, but power to impose these duties now lies exclusively with the Commonwealth Government. All other realms of taxation, however, are open to both Governments. Each imposes on the people of the State an income tax, a land tax (which, however, in the case of the State tax is very limited in its application), and probate duties; in addition the State imposes stamp duties, and motor, betting, totalisator and racecourse admission taxes, also fees for the issue of certain licenses, while the Commonwealth levies a tax upon entertainments.

The expenditure of the State Government, other than loan expenditure, may be classed conveniently under two heads, (a) Government expenditure, which includes interest and charges on debt, expenditure in connection with education, health (including hospitals), charities, justice, police, prisons, lands (including closer settlement), mines, agriculture, forests, water conservation and irrigation, and public works, including industrial undertakings; and (b) expenditure of the business undertakings, viz., Railways and Tramways, Metropolitan and Hunter River District Water Supply and Sewerage Boards, and the Sydney Harbour Trust.

The Commonwealth bears the expenditure upon trade and customs, naval and military defence, lighthouses, navigation, quarantine, astronomical and meteorological observations, old age and invalid pensions, and of the Post and Telegraph Department, which is in the nature of a business undertaking.

Local governing bodies are required to levy a general rate of not less than one penny in the pound on the unimproved capital value of land, and have power also to levy certain other rates on either the unimproved or the improved value. The extent of their rating powers is described in that portion of this Year Book which treats of local government. Their general expenditure is confined to administration, health, roads, and other public services.

The Water and Sewerage Boards are empowered to levy rates to meet the cost, including interest on capital, of the services rendered, and in like manner the Sydney Harbour Trust has power to demand and collect wharfage and tonnage rates in respect of vessels berthed at any wharf, etc., vested in the Commissioners of the Trust, or of their cargoes.

Each Government raises such loan money as it requires for its own purposes. Loans raised by the State have been devoted chiefly to developmental and reproductive works, and all the loans raised by the Commonwealth Government prior to the war were similarly applied, but those raised during the years 1915 to 1921, amounting to £250,000,000, were raised for war purposes or for the payment of gratuities to, and the repatriation of Australian soldiers.

Municipalities and Shires have power under certain conditions to raise loans. In the case of a municipality the total amount of loans must not exceed 20 per cent. of the unimproved value of the ratable land in its area.

and, in the case of a shire, thrice its annual income. Such loans are guaranteed by the State Government.

## TAXATION.

The total amount of taxes collected from the people of New South Wales by the several authorities during the year 1921-22 amounted to £34,308,252. The various forms of State taxation yielded a revenue of £7,249,017; the Commonwealth Government collected taxes amounting to £20,954,265, and receipts by local bodies from rates and charges were £6,104,970.

The following statement shows in detail the taxation collected in New South Wales by the State and Commonwealth Governments, and the rates and charges received by local bodies, etc., during the five years ended the 30th June, 1922.

Head of Taxation, or Charge.	1918.	1919.	1920.	1921.	1922.
<b>STATE.</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>
Land Tax ... ..	2,921	2,800	2,834	2,717	2,490
Income Tax ... ..	2,182,117	2,355,243	2,308,267	4,399,860	4,077,897
Stamp and Probate Duties.					
Stamps ... ..	557,233	631,007	889,512	1,316,671	1,235,911
Bank-note Composition..	1,556	1,456	1,327	1,461	1,412
Betting Tickets..	57,391	54,841	87,504	96,336	106,066
Probate ... ..	673,711	574,950	1,061,574	727,716	906,289
Settlement and Companies' Death Duties ...	3,722	925	959	6,636	1,018
Total, Stamp Duties £	1,293,613	1,263,179	2,040,876	2,148,820	2,250,696
Motor Tax ... ..	79,169	90,716	110,390	123,590	141,772
Betting Taxes ... ..	59,359	72,290	93,726	108,911	110,129
Totalizator Tax ... ..	82,802	132,403	222,970	274,171	281,818
Racecourse Admission Tax	...	...	...	117,820	155,630
Licenses ... ..	160,520	167,359	183,455	212,744	228,585
Total, State Taxation ... £	3,860,501	4,083,990	4,962,518	7,388,133	7,249,017
<b>COMMONWEALTH.</b>					
Customs Duties ... ..	4,682,456	5,398,654	6,604,913	9,797,982	7,847,620
Excise ... ..	1,934,809	2,841,047	4,015,417	5,027,497	5,057,694
Probate and Succession Duties ... ..	388,095	310,454	452,972	469,317	373,821
Land Tax* ... ..	1,094,222	1,036,974	1,162,460	1,144,174	1,268,338
Income Tax* ... ..	2,969,932	4,430,035	5,245,497	5,280,977	5,613,053
War-time Profits Tax*	148,250	467,040	1,293,840	844,425	516,198
Entertainment Tax ...	102,195	136,892	234,615	272,631	277,541
Total, Commonwealth Taxation ... £	11,319,959	14,621,006	19,009,714	22,777,003	20,954,265
<b>LOCAL.</b>					
Wharfage and Tonnage Rates ... ..	316,186	365,033	355,784	551,377	687,119
Fees for Registration of Dogs ... ..	17,114	18,311	17,678	19,137	20,370
†Municipal Rates—					
City of Sydney ... ..	455,040	465,988	564,747	623,766	747,654
Suburban and Country Municipalities ...	1,186,417	1,241,178	1,327,351	1,630,626	1,855,557
†Shire Rates ... ..	691,593	729,966	763,356	868,809	1,034,147
Water and Sewerage Rates—(Metropolitan and Hunter) ... ..	1,058,128	1,234,340	1,309,146	1,618,261	1,760,123
Total, Local Rates and Charges ... £	3,724,478	4,054,816	4,338,062	5,311,976	6,104,970
Grand Total ... £	18,904,938	22,759,902	28,310,294	35,477,112	34,308,252

\* Partly estimated. † Year ended 31st December preceding.

*Taxation per Head of Population.*

The previous quotations, stated in their equivalent rates per head of population, are shown in the following table:—

Head of Taxation, or Charge.	1918.	1919.	1920.	1921.	1922.
<b>STATE.</b>	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Land Tax ... ..	1 2 8	1 4 0	1 2 8	2 2 1	1 18 4
Income Tax ... ..					
Stamp and Probate Duties—					
Stamps ... ..	0 5 10	0 6 5	0 8 9	0 12 7	0 11 8
Bank-note Composition	0 0 7	0 0 7	0 0 10	0 0 11	0 1 0
Betting Tickets ... ..	0 7 0	0 5 10	0 10 5	0 7 0	0 8 6
Probate ... ..					
Settlement and Companies					
Death Duties ... ..				0 0 1	
Total, Stamp Duties £	0 13 5	0 12 10	1 0 0	1 0 7	1 1 2
Motor Tax ... ..	0 0 10	0 0 11	0 1 1	0 1 2	0 1 4
Betting Taxes ... ..	0 0 7	0 0 9	0 0 11	0 1 1	0 1 0
Totalizator Tax ... ..	0 0 11	0 1 4	0 2 2	0 2 8	0 2 8
Racecourse Admission Tax				0 1 2	0 1 6
Licenses ... ..	0 1 9	0 1 8	0 1 10	0 2 0	0 2 2
Total, State Taxation £	2 0 2	2 1 6	2 8 8	3 10 9	3 8 2
<b>COMMONWEALTH.</b>					
Customs Duties ... ..	2 8 8	2 14 11	3 4 10	4 13 9	3 13 9
Excise ... ..	1 0 1	1 8 11	1 19 5	2 8 2	2 7 7
Probate Duties ... ..	0 4 1	0 3 1	0 4 5	0 3 11	0 3 6
Land Tax* ... ..	0 11 4	0 10 7	0 11 5	0 10 11	0 11 11
Income Tax* ... ..	1 10 11	2 5 1	2 11 6	2 10 7	2 12 9
War-time Profits Tax*	0 1 6	0 4 9	0 12 8	0 8 1	0 4 10
Entertainment Tax ... ..	0 1 1	0 1 5	0 2 4	0 2 7	0 2 7
Total, Commonwealth Taxation ... £	5 17 8	7 8 9	9 6 7	10 18 0	9 16 11
<b>LOCAL.</b>					
Wharfage and Tonnage Rates ...	0 3 4	0 3 8	0 3 6	0 5 3	0 6 6
Fees for Registration of Dogs ...	0 0 2	0 0 2	0 0 2	0 0 2	0 0 2
†Municipal Rates—					
City of Sydney ... ..	0 4 9	0 4 9	0 5 7	0 5 11	0 7 0
Suburban and Country Municipalities ... ..	0 12 4	0 12 8	0 13 0	0 15 7	0 17 5
†Shire Rates ... ..	0 7 2	0 7 5	0 7 6	0 8 4	0 9 9
Water and Sewerage Rates— (Metropolitan and Hunter) ...	0 11 0	0 12 7	0 12 10	0 15 6	0 16 7
Total, Local Rates and Charges ... .. £	1 18 9	2 1 3	2 2 7	2 10 9	2 17 5
Grand Total ... .. £	9 16 7	11 11 6	13 17 10	16 19 6	16 2 6

\* Partially estimated. † Year ended 31st December preceding.

Particulars of revenue from taxation in the other States, and in the Commonwealth, will be found on page 84.

*State Land Tax.*

The land tax of the State is levied on the unimproved value at the rate of 1d. in the £. A sum of £240 is allowed by way of exemption, and where the unimproved value is in excess of that sum, a reduction equal to the exemption is made; but where several blocks of land within the State are held by a person or company, only one amount of £240 may be deducted from the aggregate unimproved value.

The State land tax is now levied only on the unincorporated portion of the Western Division.

*State Income Tax.*

Income tax is payable by all persons, other than companies, in receipt of more than £250 per annum, derived from all sources within New South Wales, and in the case of companies the total receipts are taxable. A taxpayer is entitled to a deduction of £50 in respect of each child under 18 years of age wholly maintained by him, and insurance and superannuation premiums up to £50 are exempt.

The tax payable under Act No. 21 of 1922 by any company is 2s. 6d. in the £ on the taxable income of the company without exemption, and the rates per £ for persons other than companies are as follows:—

On taxable income which does not exceed £250	...	...	...	1s.
„ „ exceeds £250 and does not exceed £500	„	£500	...	1s. 1d.
„ „ „ £500	„	£750	...	1s. 2d.
„ „ „ £750	„	£1,000	...	1s. 3d.
„ „ „ £1,000	„	£1,500	...	1s. 4d.
„ „ „ £1,500	„	£2,000	...	1s. 5d.
„ „ „ £2,000	„	£2,500	...	1s. 6d.
„ „ „ £2,500	„	£3,000	...	1s. 7d.
„ „ „ £3,000	„	£3,500	...	1s. 8d.
„ „ „ £3,500	„	£4,000	...	1s. 10d.
„ „ „ £4,000	„	£5,000	...	2s. 0d.
„ „ „ £5,000	„	£7,000	...	2s. 2d.
„ „ „ £7,000	„	...	...	2s. 3d.

In each case an addition of one-third of the tax is made on so much of the income as is derived from the produce of property. In computing the tax payable, income from personal exertion is first taken into account.

In the case of a taxpayer whose income is derived wholly from agricultural, dairying, or pastoral pursuits, although the tax is payable upon the taxable income derived during the year of assessment, the rate of tax payable is determined upon the average taxable income of that year and the four years immediately preceding.

The exemptions from income-tax are as follow:—

Municipal corporations and other local authorities.

Mutual life assurance societies, and other companies or societies not carrying on business for purposes of profit or gain, except income from mortgages.

Societies registered under the Friendly Societies Act, or under any Act relating to Trade Unions.



Ecclesiastical, Charitable, and Educational Institutions of a public character, whether supported wholly or partly by grants from the Consolidated Revenue Fund or not.

Income arising or accruing to any person from Government debentures, inscribed stock, and treasury bills.

Dividends derived from shares in a company.

Starr-Bowkett Building Societies.

These exemptions do not extend to the salaries and wages of persons employed by any such corporation, company, society, or institution, whether paid wholly or in part from the revenues thereof.

No statistics relating to incomes are available. In addition to the income tax levied by the State a tax on incomes is imposed by the Commonwealth also. Particulars are given on page 57.

#### *State Stamp and Probate Duties.*

In the year 1914 additional Stamp and Probate Duties were imposed, and from the 1st January, 1921, the charges were further increased under the Stamp Duties Act of 1920. The rates payable on estates of deceased persons under the 1920 Act are as follow:—

Over £1,000 and under £5,000—2 per cent.					
„ £5,000	„	£10,000—2½ to 4½ per cent.	Increase = ½ per cent.	per £1,000.	
„ £10,000	„	£20,000—5 to 7 „	Increase = ½ „	£2,000.	
„ £20,000	„	£40,000—7½ to 19 „	Increase = ½ „	£5,000.	
„ £40,000	„	£150,000—19½ „			
Exceeding £150,000—20 per cent.					

The duties are charged upon the whole value of the estate, but estates valued at not more than £1,000 are exempt.

Half rates are allowed on estates under £5,000 when the property passes to widows, or to legitimate children under 21 years of age.

Particulars of the estate duties imposed by the Commonwealth are given on page 58.

Many legal documents are subject to stamp duty, and a stamp duty of 2d. is imposed upon all cheques and upon receipts, whether by cash or cheque, for amounts of £2 or more.

#### *State Motor Tax.*

Motor vehicles must be registered annually with the Police Department, and on such registration a fee fixed at a minimum of £1 is payable in respect of a motor cycle, motor tricycle, or taxi-cab. On other motor vehicles the license fee ranges between £2 and £20, and the basis upon which it is payable is the “horse-power” of the vehicle. Motor cars used by medical practitioners or clergymen, public motor cars (except taxi-cabs), and trade motor vehicles pay half-rates. Government and ambulance motor vehicles, and those owned by municipalities and shires, or by the City of Sydney, are exempt from taxation. The total number of motor vehicles licensed, including motor cycles, was 43,480, and the revenue benefited by the tax during 1921-22 to the extent of £141,772, while £55,733 were received for licenses.

*State Betting Taxes.*

The Finance (Taxation) Act, 1915, and amending Acts, imposed taxes on racing clubs and associations, on bookmakers, and on betting tickets.

With regard to the clubs, the taxes are levied on licenses and fees received from bookmakers. The existing rates range from 50 per cent. on racecourses within 40 miles of the General Post Office, Sydney, or 20 miles from the Post Office, Newcastle, to 20 per cent. on courses outside the limits mentioned.

The taxes payable by bookmakers are regulated according to the particular courses and enclosures where operations are carried on, and vary considerably. The total amount received during the year ended 30th June, 1922, from the betting taxes, was £110,129.

The Act of 1915 further provided for the imposition of a stamp duty on all betting tickets issued by bookmakers, the amount being one penny in the saddling paddock, and one half-penny for the other parts of the racecourse. During 1917 these rates were doubled, and in 1920 the amount on the paddock tickets was increased to threepence, but the other rates were not altered. In addition to these amounts, bookmakers are required to furnish a monthly statement showing the number of credit bets made, the duty on which is the same as if tickets had been issued. The revenue derived from this source during the year ended the 30th June, 1922, was £106,066.

*State Totalizator Tax.*

The Totalizator Act (No. 75, 1916) was passed on the 20th December, 1916, and was amended by Acts No. 29, 1919, and No. 16, 1920. The revenue derived from this source during the year 1921-22 amounted to £281,818.

All registered racing clubs and associations must establish an approved totalizator. The commission to be deducted from the total amount invested is  $12\frac{1}{2}$  per cent., with an additional 1 per cent. for the sinking fund to meet the cost of machines. The contribution which must be paid to the State Treasurer by clubs racing for profit is 9 per cent. of the total payments into the machine and by other clubs  $5\frac{1}{2}$  per cent.

*State Racecourse Admission Tax.*

An Act enabling the Government to levy a tax on persons entering racecourses, came into operation on the 1st October, 1920, and an amending Act was passed on the 31st December, 1920. The Acts apply to all racecourses within 40 miles of the General Post Office, Sydney, and a similar distance from the Newcastle Post Office. The amounts leviable are:—Twopence on the admission charge through the outside gate or into the flat, 10d. into the Leger Reserve, while into the Saddling Paddock the rate is 3s. for males, 2d. additional being charged at Randwick, and 1s. 7d. for females. If no charge is made at the outside gate the tax for the Leger and Paddock enclosures is 2d. higher. Members and season ticket-holders are required to pay a tax equal to 40 per cent. on the amount of their annual subscriptions.

In order to carry out the provisions of this Act, racing clubs are compelled to furnish returns of the number of persons who paid for admission and the number of members and season ticket holders. The total amount received on account of this tax for the year ended 30th June, 1922, was £155,630.

This amount, added to the receipts from betting and totalisator taxes, brings the total revenue from racing taxation to £653,643.

*Commonwealth Land Tax.*

The first direct taxation by the Federal Government was imposed in 1910, when the Land Tax was passed, which levies a graduated tax on the unimproved value of the lands of the Commonwealth. In the case of owners who are not absentees, an amount of £5,000 is exempt, and the rate of tax is  $1\frac{1}{18750}$ d. for the first £1 of value in excess of that amount, and increases uniformly to 5d. in the £ on a taxable balance of £75,000, with 9d. in the £ for every £ in excess of that amount. Absentee owners are required to pay 1d. in the £ up to £5,000, with a uniform progression from  $2\frac{1}{18750}$ d. to 6d. for the next £75,000. On every £ in excess of £80,000, the rate payable is 10d.. An additional tax of 20 per cent. was imposed under an Act passed in 1918, but repealed in 1922.

Lands exempt from taxation are those owned by a State, municipality, or other public authority, by savings banks, friendly societies, or trade unions, or such as are used solely for religious, charitable, or educational purposes.

The latest available statement issued by the Commonwealth Commissioner of Taxation shows that the land tax payable for New South Wales property by residents was £1,192,086, by absentees £23,635; total, £1,215,721. For the whole Commonwealth the corresponding figures were:—Residents, £2,133,117; absentees, £55,106; total, £2,188,223.

*Commonwealth Income Tax.*

In addition to the taxation of incomes imposed by the State, the Commonwealth levies a tax which is payable by residents and absentees in respect of income derived from sources within Australia (which includes Papua).

The exemptions from taxation include the revenues and funds of local governing bodies or public authorities; friendly societies; trade unions and kindred associations; religious, scientific, charitable, or public educational institutions; interest on certain Commonwealth war loan securities; the income of provident, benefit or superannuation funds established for the benefit of the employees in any business and of funds established by any will or instrument for public charitable purposes; salaries of Governor-General, State Governors, foreign consuls, and trade commissioners of any part of the British Dominions; agricultural, pastoral and horticultural, viticultural, stock-raising, manufacturing and other industrial societies not carried on for profit or gain; musical, art, scientific, and literary societies; remuneration paid by the Commonwealth or a State Government to non-residents for expert advice, and war pensions paid under the Australian Soldiers' Repatriation Act, 1920-21.

Resident taxpayers are allowed an exemption of £200 less £1 for every £3 by which the income exceeds £200. Absentees are assessed on their total incomes from all sources in Australia.

Special deductions include £40 for every child under 16 years of age maintained by a resident taxpayer; payments up to £100 for friendly society benefits, superannuation, &c.; and up to £50 for life assurance and fidelity guarantee; and gifts over £5 each to public charitable institutions or contributions to the Department of Repatriation.

The rate of taxation upon incomes derived from personal exertion is  $3\frac{3}{800}$ d. per pound sterling up to £7,600, increasing uniformly with each increase of one pound sterling of the taxable income by three eight-hundredths of one penny, until an average rate of 2s.  $7\frac{1}{2}$ d. per pound is reached at £7,600. Over £7,600 the rate per pound sterling is 5s.

The rate of taxation upon incomes up to £546 derived from property is stated by the following formula:—

$$R = \left( 3 + \frac{I}{181.058} \right) \text{pence,}$$

R being the average rate of tax in pence per pound sterling, and I the taxable income in pounds sterling.

Over the sum of £546, and up to £2,000, the tax increases continuously with the increase of the taxable income till it reaches 33.6 pence per pound sterling on £2,000 10s., thence up to a rate of 5s. for every pound sterling in excess of £6,500.

To the tax payable in all cases is added a further tax equal to 53.5 per cent.

Companies pay a flat rate of 2s. 5d. in the £ on such of the taxable incomes as have not been distributed to members or shareholders, and 7d. in the £ on dividends and interest paid to absentees.

In assessments for the year beginning 1st July, 1922, and subsequent years, the rate to be applied to the taxable income is to be calculated as if the taxable income were the average of the taxable incomes derived in a period of at least two and not more than five years immediately preceding.

Winners of prizes in lotteries pay a tax of 12½ per cent.

#### *Commonwealth Estate Duties.*

The Estates Assessment Act (No. 22 of 1914) provided for the imposition of a duty on properties of persons who died after the commencement of the Act. The rates are 1 per cent. where the total value exceeds £1,000 but does not exceed £2,000, and an additional one-fifth per cent. for every thousand pounds, or part thereof, in excess of two thousand pounds, the maximum being 15 per cent.

A reduction to two-thirds of the above rates is allowed if the estate is left to the widow, children, or grandchildren of the testator.

Estates of persons who died on active service in the War, or as the result of injuries or diseases contracted while on active service, are exempt.

#### *Commonwealth Entertainments Tax.*

The Entertainments Tax is levied on payments for admission to almost every class of amusement at the rate of one penny when the payment for admission is one shilling, and, if it exceeds one shilling, one halfpenny for every sixpence or part of sixpence by which it exceeds such amount. Details of the various classes of entertainment and the amount of tax collected, also the number of persons admitted and the amounts paid, will be found in Part Social Condition of this book.

#### THE STATE ACCOUNTS.

The State Accounts are kept on a cash basis, and the financial position can be ascertained readily from the annual statement prepared by the Treasurer. This, however, involves the consideration of the Consolidated Revenue Account, Closer Settlement Account, Public Works Account, Loans Account, the various Trust Accounts shown on page 70, and the accounts of the industrial undertakings shown on page 67, which do not form part of the Consolidated Revenue Account. Some little difficulty, moreover, may be experienced in determining the actual position, as due regard must be given to such items as refunds, advances, cancellations, and cross entries.

All expenditure from loan moneys must be authorised under an Appropriation Act, in the same manner as the ordinary expenditure chargeable to the general revenue. There is a restriction on the expenditure, whether from loans or from revenue, in the provisions of the Public Works Act. Under that Act the question of constructing all works estimated to cost more than £20,000, except those connected with the maintenance of railways, is referred by resolution of the Legislative Assembly to the Parliamentary Standing Committee elected by the members of each parliament. The Committee investigates and reports to Parliament, and the Assembly decides whether it is expedient to carry out the proposed work; if the decision be favourable, a bill based thereon must be passed before the authorisation is absolute.

#### THE CONSOLIDATED REVENUE ACCOUNT.

The Consolidated Revenue Account for each year shows the whole of the receipts and expenditure, inclusive of those in connection with business undertakings, but exclusive of transactions under the Loans Account and the other accounts previously mentioned. All revenue is paid into the Consolidated Revenue Account, but the whole cannot be used for general purposes, as, under section 13 of the Forestry Act, 1916, one-half of the gross proceeds received by the Forestry Commission must be carried to a special account and set apart for afforestation; also, under the Public Works and Closer Settlement Funds Act, 1906, two-thirds of the net proceeds of the sale of Crown lands, exclusive of interest, less 20 per cent., must be paid to the Public Works Fund. These are the only cases in which revenue is earmarked for specific purposes.

The receipts during the year ended 30th June, 1922, amounted to £35,637,820, and the expenditure to £36,966,525, so that on the operations of the year there was a deficit of £1,328,705, which increased the accumulated deficiency to £3,578,263. Similar details for each of the last ten years are shown in the following table, also the revenue and expenditure per head of population:—

Year ended 30th June.	Receipts.		Expenditure.		Surplus (+) or deficiency (—).	
	Total.	Per inhabitant.	Total.	Per inhabitant.	On operations of year.	Accumulated at end of year.
	£	£ s. d.	£	£ s. d.	£	£
1913	16,550,521	9 5 5	17,778,900	9 19 2	(—) 1,228,379	(—) 1,167,017
1914	18,438,228	9 19 8	18,065,189	9 15 7	(+) 373,039	(—) 792,978
1915	18,946,227	10 1 1	18,516,179	9 16 7	(+) 430,048	(—) 363,930
1916	19,703,518	10 8 0	19,533,927	10 6 6	(+) 149,591	(—) 214,339
1917	20,522,097	10 16 8	20,790,895	10 19 7	(—) 268,798	(—) 483,137
1918	21,543,742	11 4 0	21,519,918	11 3 9	(+) 23,824	(—) 459,313
1919	23,448,166	11 18 6	23,233,398	11 16 4	(+) 214,768	(—) 244,545
1920	28,650,496	14 1 2	30,210,013	14 16 6	(—) 1,559,517	(—) 1,804,032
1921	34,031,336	16 5 8	34,476,892	16 10 0	(—) 445,496	(—) 2,249,558
1922	35,637,820	16 15 0	36,966,525	17 7 6	(—) 1,328,705	(—) 3,578,263

The increases in revenue and expenditure, although constant, were gradual until 1919-20. The abnormal increase of £7,000,000 and £4,000,000 in the expenditure for that year and the following year were due largely to the raising of the basic wage from £3 to £3 17s. in October, 1919, and from £3 17s. to £4 5s. per week in October, 1920.

*Heads of Revenue and Expenditure.*

The following table shows the details of revenue and expenditure during the last five financial years. The revenue and expenditure in 1921-22 were the largest recorded for the State, and the principal increases in each case occurred in the business undertakings. The excess of expenditure was £1,328,705, largely caused by unforeseen obligations which had to be met, viz.:—increased expenditure on railways, tramways, and other public works, due to the higher basic wages fixed by the Board of Trade; increase in interest on debt due to higher rates; payments of guarantees for wheat; losses on business and industrial undertakings; contributions to superannuation funds; and relief to unemployed.

	1918.	1919.	1920.	1921.	1922.
<b>REVENUE.</b>					
<i>Governmental.</i>					
Revenue Returned by Commonwealth .. ..	£ 2,317,783	£ 2,380,139	£ 2,472,717	£ 2,533,234	£ 2,632,036
State Taxation .. .. .	3,860,501	4,083,990	4,962,518	7,388,138	7,249,017
Land Revenue—					
Alienation .. .. .	1,068,676	1,049,674	1,115,399	1,235,951	1,150,777
Occupation and Miscellaneous .. .. .	759,297	778,733	800,040	915,514	878,043
Total Land Revenue .. .. .	£ 1,827,973	£ 1,828,407	£ 1,915,439	£ 2,151,465	£ 2,028,820
Services Rendered .. .. .	406,490	446,837	543,278	748,291	923,915
General Miscellaneous .. .. .	519,016	632,039	683,140	695,324	988,050
Industrial Undertakings .. .. .	12,348	11,581	12,505	12,005	11,050
Advances Repaid .. .. .	143,396	28,508	95,856	40,082	92,596
Total Governmental .. .. .	£ 9,067,507	£ 9,411,599	£ 10,685,453	£ 13,568,535	£ 13,905,492
<i>Business Undertakings.</i>					
Railways and Tramways .. .. .	10,821,648	12,183,026	15,997,584	18,047,889	19,145,082
Sydney Harbour Trust .. .. .	576,459	618,901	653,313	797,211	827,123
Water Supply and Sewerage .. .. .	1,058,128	1,234,310	1,309,146	1,618,261	1,760,123
Total Business Undertakings .. .. .	£ 12,456,235	£ 14,036,267	£ 17,965,043	£ 20,463,361	£ 21,732,328
Grand Total .. .. .	£ 21,543,742	£ 23,448,166	£ 28,650,496	£ 34,031,396	£ 35,637,820
<b>EXPENDITURE.</b>					
<i>Governmental.</i>					
Interest on Public Debt and Special Deposits .. .. .	1,089,728	975,352	1,074,896	1,637,586	1,604,617
Reduction of Public Debt .. .. .	6,819	6,832	6,976	2,566	
Transfer to Public Works Fund .. .. .	369,781	369,789	402,388	451,561	406,708
Departments—					
Premier .. .. .	92,893	92,576	139,076	119,480	76,779
Chief Secretary .. .. .	819,100	829,090	1,157,293	1,359,375	1,474,054
Public Health .. .. .	732,246	802,280	954,957	1,258,910	1,215,622
Treasurer (excluding Business Undertakings and Interest on Deposits, &c.) .. .. .	827,019	808,294	1,711,092	1,158,860	1,054,192
Attorney-General and Justice .. .. .	419,957	434,334	467,508	576,224	631,191
Lands .. .. .	384,959	396,348	524,700	580,940	630,704
Public Works (excluding Business Undertakings) .. .. .	429,393	427,500	515,862	635,128	658,080
Public Instruction (excluding Endowments) .. .. .	2,090,610	2,271,257	2,505,483	3,702,721	4,085,177
Labour and Industry .. .. .	46,076	63,022	91,524	102,287	99,882
Mines .. .. .	61,744	62,745	73,421	72,059	94,593
Agriculture .. .. .	295,791	254,809	304,752	450,788	473,871
Local Government—					
Administration .. .. .	29,002	27,490	24,133	37,641	45,255
Endowments and Grants .. .. .	325,145	332,664	324,917	347,869	371,366
All Other Services .. .. .	544,216	558,463	917,216	1,072,094	1,146,950
Transfers to Public Works Fund .. .. .	250,000	200,000	200,000	200,000	200,000
Advances made .. .. .	170,553	306,474	703,508	247,745	1,010,102
Total Governmental .. .. .	£ 8,985,425	£ 9,219,299	£ 12,100,002	£ 14,014,452	£ 15,293,243
<i>Business Undertakings (Working Expenses and Interest).</i>					
Railways and Tramways .. .. .	10,969,924	12,370,545	16,158,569	18,295,055	19,275,193
Sydney Harbour Trust .. .. .	499,156	510,785	583,245	643,801	706,795
Water Supply and Sewerage .. .. .	1,065,413	1,132,769	1,368,197	1,521,554	1,691,289
Total Business Undertakings .. .. .	£ 12,534,493	£ 14,014,099	£ 18,110,011	£ 20,460,410	£ 21,673,277
Grand Total .. .. .	£ 21,519,918	£ 23,233,398	£ 30,210,013	£ 34,476,862	£ 36,966,520

From the foregoing figures the following rates per head of population have been determined:—

	1913.	1919.	1920.	1921.	1922.
<b>REVENUE.</b>					
<i>Governmental.</i>					
Revenue Returned by Commonwealth.. ..	£ s. d. 1 4 1	£ s. d. 1 4 3	£ s. d. 1 4 3	£ s. d. 1 4 3	£ s. d. 1 4 9
State Taxation .. .. .	2 0 2	2 1 7	2 8 8	3 10 9	3 8 2
Land Revenue—					
Alienation .. .. .	0 11 1	0 10 8	0 11 0	0 11 10	0 10 7
Occupation and Miscellaneous .. .. .	0 7 11	0 7 10	0 7 10	0 8 9	0 8 3
Total .. .. .	£ 0 19 0	0 18 6	0 18 10	1 0 7	0 18 10
Services Rendered .. .. .	0 4 3	0 4 7	0 5 4	0 7 2	0 5 8
General Miscellaneous .. .. .	0 5 5	0 6 5	0 6 9	0 6 8	0 9 4
Industrial Undertakings .. .. .	0 0 1	0 0 1	0 0 1	0 0 1	0 0 1
Advances Repaid .. .. .	0 1 6	0 0 4	0 0 11	0 0 4	0 0 10
Total Governmental .. .. .	£ 4 14 6	4 15 9	5 4 10	6 9 10	6 10 8
<i>Business Undertakings.</i>					
Railways and Tramways .. .. .	5 12 6	6 3 11	7 17 0	8 12 9	9 0 0
Sydney Harbour Trust .. .. .	0 6 0	0 6 4	0 6 6	0 7 7	0 7 9
Water Supply and Sewerage .. .. .	0 11 0	0 12 6	0 12 10	0 15 6	0 16 7
Total Business Undertakings .. .. .	£ 6 9 6	7 2 9	8 16 4	9 15 10	10 4 4
Grand Total .. .. .	£ 11 4 0	11 18 6	14 1 2	16 5 8	16 15 0
<b>EXPENDITURE.</b>					
<i>Governmental.</i>					
Interest on Public Debt and Special Deposits .. .. .	0 11 4	0 9 11	0 10 6	0 15 8	0 15 1
Reduction of Public Debt .. .. .	0 0 1	0 0 1	0 0 1	..	..
Transfer to Public Works Fund .. .. .	0 3 10	0 3 9	0 3 11	0 4 4	0 3 10
Departments—					
Premier .. .. .	0 1 0	0 0 11	0 1 4	0 1 2	0 0 8
Chief Secretary .. .. .	0 9 7	0 8 5	0 11 4	0 13 0	0 13 10
Public Health .. .. .	0 7 8	0 8 2	0 9 5	0 12 1	0 11 5
Treasurer (excluding Business Undertakings and Interest on Deposits, &c.) .. .. .	0 8 8	0 8 3	0 16 10	0 11 1	0 9 11
Attorney-General and Justice .. .. .	0 4 5	0 4 5	0 4 7	0 5 6	0 6 2
Lands .. .. .	0 4 0	0 4 0	0 5 2	0 5 7	0 6 0
Public Works (excluding Business Undertakings) .. .. .	0 4 6	0 4 4	0 5 1	0 6 1	0 6 2
Public Instruction (excluding Endowments) .. .. .	1 1 4	1 3 1	1 4 7	1 15 5	1 18 5
Labour and Industry .. .. .	0 0 6	0 0 8	0 0 11	0 1 0	0 0 11
Mines .. .. .	0 0 8	0 0 8	0 0 9	0 0 8	0 0 11
Agriculture .. .. .	0 3 1	0 2 7	0 3 0	0 4 4	0 4 5
Local Government—					
Administration .. .. .	0 0 4	0 0 4	0 0 3	0 0 4	0 0 5
Endowments and Grants .. .. .	0 3 5	0 3 5	0 2 2	0 3 4	0 2 6
All Other Services .. .. .	0 4 8	0 5 8	0 9 0	0 10 3	0 10 9
Transfers to Public Works Fund .. .. .	0 2 7	0 2 0	0 2 0	0 1 11	0 1 11
Advances made .. .. .	0 1 9	0 3 2	0 6 11	0 2 5	0 9 6
Total Governmental .. .. .	£ 4 13 5	4 13 10	5 18 10	6 14 2	7 3 10
<i>Business Undertakings. (Working Expenses and Interest).</i>					
Railways and Tramways .. .. .	5 14 1	6 5 10	7 18 6	8 15 1	9 1 2
Sydney Harbour Trust .. .. .	0 5 3	0 5 3	0 5 9	0 6 2	0 6 8
Water Supply and Sewerage .. .. .	0 11 0	0 11 5	0 13 5	0 14 7	0 15 10
Total Business Undertakings .. .. .	£ 6 10 4	7 2 6	8 17 8	9 15 10	10 3 8
Grand Total .. .. .	£ 11 3 9	11 16 4	14 16 6	16 10 0	17 7 6

#### *Land Revenue of the State.*

The receipts from the sale and occupation of Crown lands are treated as public income. Although the proceeds from occupation, being rent, can be reasonably regarded as an item of revenue, the inclusion of the proceeds of auction, conditional purchase, and other classes of sale as ordinary revenue is open to serious objection. It has been urged in justification of

this course that the sums so obtained have enabled the Government to construct works which enhance the value of the remaining public lands and facilitate settlement. Under the Act instituting the Public Works Fund, two-thirds of the net proceeds of the sale of Crown lands, less 20 per cent., equivalent to a clear 53½ per cent., are paid into the fund.

The revenue from lands may be grouped under three main heads—(a) auction sales and other forms of unconditional sale; (b) conditional sales under the system of deferred payments; (c) rents from pastoral, mining, and other classes of occupation. The net receipts from each source in 1921-22 were £43,550, £1,087,227, and £648,721 respectively, while miscellaneous receipts amounted to £229,322, making a total of £2,008,820.

The land policy of the State, though largely connected with public finance, is discussed in that part of this volume which treats of Land Settlement.

#### *Receipts for Services Rendered.*

The net amount collected for services rendered by the State, other than for trading concerns, during the year ended 30th June, 1922, was £923,915. The principal sources of revenue were Pilotage, Harbour and Light Rates, &c., £201,269, and Registrar-General, Fees, £176,753.

#### *General Miscellaneous Receipts*

All items which cannot be placed under the headings already mentioned are included herein. The total in 1921-22 amounted to £988,055.

The balance of the revenue for the year ended 30th June, 1922, consisted of the amount returned by the Commonwealth, £2,622,036, and interest and contributions from Industrial Undertakings (Act No. 22, 1912), £11,050.

#### *Expenses of General Government and of Business Undertakings.*

The following statement shows the expenditure classified under two headings—the ordinary expenditure of the General Government, including interest on the capital liability of the services connected therewith, and the expenditure on services practically outside the administration of General Government, including interest on their capital liability. The expenditure of the industrial undertakings shown on page 67, and of the Murrumbidgee Irrigation Area are not included. The figures for the ten years ended the 30th June, 1922, and the rates per inhabitant, were as follow:—

Year ended 30th June	Governmental.			Business Undertakings.				Grand Total Expenditure (Including Advances).
	General Services.	Interest and Redemptions.	Total.	Railways and Tramways.	Water Supply and Sewerage.	Sydney Harbour Trust.	Total.	
	£	£	£	£	£	£	£	£
1913	6,879,802	1,066,528	7,946,330	8,754,490	688,943	389,237	9,832,570	17,778,900
1914	6,438,271	1,028,363	7,466,634	9,505,926	725,931	366,698	10,598,555	18,065,189
1915	6,830,162	977,123	7,807,285	9,540,159	785,300	383,435	10,708,894	18,516,179
1916	7,120,558	1,064,273	8,184,831	10,107,140	841,278	420,669	11,369,096	19,553,927
1917	7,535,774	1,011,060	8,546,834	10,794,690	984,803	464,565	12,244,061	20,790,895
1918	7,888,877	1,096,548	8,985,425	10,969,924	1,065,413	499,156	12,534,493	21,519,918
1919	8,237,115	982,184	9,219,299	12,370,545	1,132,769	510,785	14,014,099	23,233,398
1920	11,018,130	1,081,872	12,100,002	16,158,569	1,368,197	583,245	18,110,011	30,210,013
1921	12,374,300	1,640,152	14,014,452	18,295,085	1,521,554	645,801	20,462,440	34,476,892
1922	13,688,556	1,604,687	15,293,243	19,275,198	1,691,289	706,795	21,673,282	36,966,525



Year ended 30th June.	Governmental.			Business Undertakings.				Grand Total Expenditure (Including Advances).
	General Services.	Interest and Redemptions.	Total.	Railways and Tramways.	Water Supply and Sewerage.	Sydney Harbour Trust.	Total.	
Expenditure per Inhabitant.								
1913	£ s. d. 4 0 10	£ s. d. 0 12 6	£ s. d. 4 13 4	£ s. d. 5 2 11	£ s. d. 0 8 1	£ s. d. 0 4 7	£ s. d. 5 15 7	£ s. d. 10 8 11
1914	3 9 8	0 11 2	4 0 10	5 2 11	0 7 10	0 4 0	5 14 9	9 15 7
1915	3 12 6	0 10 5	4 2 11	5 1 3	0 8 4	0 4 1	5 13 8	9 16 7
1916	3 15 2	0 11 3	4 6 5	5 6 9	0 8 11	0 4 5	6 0 1	10 6 6
1917	3 19 7	0 10 8	4 10 3	5 14 0	0 10 5	0 4 11	6 9 4	10 19 7
1918	4 2 0	0 11 5	4 13 5	5 14 1	0 11 0	0 5 3	6 10 4	11 3 9
1919	4 3 10	0 10 0	4 13 10	6 5 10	0 11 5	0 5 3	7 2 6	11 16 4
1920	5 8 3	0 10 7	5 18 10	7 18 6	0 13 5	0 5 9	8 17 8	14 16 6
1921	5 18 6	0 15 8	6 14 2	8 15 1	0 14 7	0 6 2	9 15 10	16 10 0
1922	6 8 9	0 15 1	7 3 10	9 1 2	0 15 10	0 6 8	10 3 8	17 7 6

General services include public health, education, police, and all other civil and legal expenditure, also the cost of public works paid out of revenue, transfers to Public Works Fund, advances, etc.

#### CLOSER SETTLEMENT ACCOUNT.

The Closer Settlement Account was established under Act No. 1 of 1906. It is not included in the operations of the Consolidated Revenue Fund, although grants from that fund have formed a considerable portion of its receipts. As its name implies, the moneys of the fund are devoted to the promotion of closer settlement.

The following statement shows the net receipts and expenditure during the financial year ended the 30th June, 1922:—

Receipts.	Amount.	Expenditure.	Amount.
	£		£
Assurance Fees—Real Property Act ..	18,186	Under Real Property Act ..	162
Repayments by Settlers .. ..	465,312	Purchase of Estates, including Contingent Expenses .. ..	1,945,336
„ on account of Improvement Leases .. ..	10,294	Interest on Loans (Recoup) .. ..	273,292
	493,742	„ Closer Settlement Debentures .. ..	200,259
Transfer from General Loan Account ..	1,500,000	„ Purchase Money .. ..	411
		Redemption of Debentures .. ..	131,190
Total Receipts .. ..	1,993,742		2,550,560
Brought forward, 30th June, 1921 ..	581,721	Balance 30th June, 1922 .. ..	24,903
	2,575,463		2,575,463

During the period of sixteen years ended 30th June, 1922, 1,681 estates, representing 6,012 farms, were purchased for closer settlement, inclusive of improvement leases, &c., acquired under Closer Settlement Acts, the total area being 3,327,746 acres. The expenditure was as follows:—Purchase money, £12,458,954; contingent expenses, £150,439; total, £12,609,393.

#### PUBLIC WORKS ACCOUNT.

The Public Works Account, like the Closer Settlement Account, does not form part of the Consolidated Revenue Fund. It was opened in the year 1906, under the authority of the same statute which provided for the Closer Settlement Fund, and it receives two-thirds of the net proceeds of the sales of Crown Lands, less 20 per cent., credited to the Consolidated Revenue Fund; the proceeds of land sales under the Public Instruction Act, 1880;

and amounts voted from the Consolidated Revenue. Its moneys, like loan proceeds, may be applied in the construction or equipment of public works, but not to the repair or upkeep of such works. The net transactions during the year ended the 30th June, 1922, are shown herewith.

Receipts.	Amount.	Expenditure.	Amount.
	£		£
Two-thirds of Net Proceeds of Sale of Crown Lands, exclusive of Interest on Purchase Money—less 20 per cent. (Act No. 9, 1906) .. ..	406,708	Business Undertakings— Railways and Tramways .. .. Metropolitan Water and Sewerage .. Hunter District Water and Sewerage .. Sydney Harbour Trust .. ..	19,351 13,219 355 25,062
Net Proceeds of Sale of Land, under Section 4, Public Instruction Act of 1880 .. .. .	988		57,987
Transfers from Consolidated Revenue Account .. .. .	200,000	Industrial Undertakings .. ..	2,012
Net Repayments on account of previous years .. .. .	166	Observatory Hill Resumed area ..	3,971
	607,862	Water and Drainage Trusts .. ..	5,393
Balance, 30th June, 1921, brought forward .. ..	284,082	Country Towns Water Supply ..	808
Grand Total .. ..	891,944	Wentworth Irrigation Area .. ..	2,065
		Government Printer .. ..	463
		Public Buildings and Sites .. ..	493,803
		Roads and Bridges .. ..	56,177
		Harbours and Rivers Navigation ..	11,138
			574,837
			638,807
		Balance, 30th June, 1922 .. ..	253,137
		Grand Total .. ..	891,944

#### *Expenditure on Public Works.*

The total expenditure on Public Works, exclusive of the cost of repairs and upkeep, during each of the last five years is shown in the following table, which distinguishes the amount disbursed from the Public Works Fund, from the Consolidated Revenue Fund, and from Loans. The amounts shown as expended from the Loans and Public Works Funds are exclusive of repayments of votes for previous years; and transfers from the Consolidated Revenue to the Public Works Fund are not included in the expenditure of the former fund.

Year ended 30th June.	Public Works Fund. (Net.)	Consolidated Revenue Fund.	Loans. (Net.)	Total Expenditure.	Per Inhabitant.
	£	£	£	£	£ s. d.
1918	532,676	576,456	4,487,511	5,596,643	2 18 2
1919	493,292	562,164	3,918,887	4,974,343	2 10 7
1920	532,097	633,166	8,794,905	9,965,170	4 17 10
1921	719,145	731,227	14,701,028	16,151,400	7 14 7
1922	638,807	771,624	10,442,732	11,853,163	5 11 5

The expenditure varies greatly from year to year according to the amounts appropriated from loans; in five-year periods the expenditure was as follows:—

Period.	Public Works Fund. (Net.)	Consolidated Revenue Fund.	Loans. (Net.)	Total Expenditure.	Per Inhabitant.
	£	£	£	£	£ s. d.
1907-11	3,990,987	2,416,391	13,088,061	19,495,439	12 9 2
1912-16	2,983,918	2,828,805	37,490,752	43,303,475	23 15 2
1917-21	2,900,659	3,078,665	38,764,510	44,743,834	22 11 5

The expenditure in the last period was only £1,400,000 in excess of that in the period immediately preceding, but both were twice as great as the expenditure in 1907-1911.

## GENERAL ACCOUNT.

Summarising the foregoing accounts, and adding the transactions on account of loans, the receipts by the State during the year ended 30th June, 1922, amounted to £57,200,786, and the expenditure to £60,931,505.

The aggregate receipts and expenditure during each of the last five years, after necessary adjustments, were as follow:—

## RECEIPTS.

Account.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
	£	£	£	£	£
Consolidated Revenue ...	21,543,742	23,443,166	28,650,496	31,031,396	35,637,820
Closer Settlement ...	161,484	164,309	1,225,183	3,096,608	1,993,742
Public Works ...	623,162	570,573	604,082	652,970	607,862
Railways Loan ...	...	...	1,559,656	...	...
General Loan ...	6,712,777	15,453,503	20,623,164	12,366,053	18,961,362
Total ...	29,041,165	39,636,551	52,662,581	50,147,027	57,200,786

## EXPENDITURE.

Consolidated Revenue ...	21,519,918	23,233,398	30,210,013	34,476,892	36,966,525
Closer Settlement ...	75,279	263,183	1,224,985	2,419,869	2,419,460
Public Works ...	532,676	493,292	572,265	719,289	633,807
Railways Loan ...	397,550	194,666	44,042	...	...
General Loan ...	4,193,033	3,735,914	8,761,223	14,734,389	10,463,224
Repayment of Loans ...	10,767	12,813,724	16,799,063	1,175,120	10,442,989
Total ...	26,729,223	40,734,177	57,611,596	53,525,559	60,931,005

The results shown above are exclusive of the transactions of the Special Deposits and Suspense Accounts; including these, the total receipts of all funds controlled by the Treasurer during 1921-22 were £80,042,212, and the expenditure £79,302,644.

The Audit Act provides that the Treasurer may arrange with any bank for the transaction of the general banking business of the State. The accounts are kept under the several headings which follow, and all amounts paid into any of the accounts mentioned are deemed to be "public moneys," and for interest purposes the several accounts are treated as one. The special accounts, which consist of "Supreme Court Moneys," are not controlled by the Audit Act, as they are operated on directly by the officers in charge of the Departments concerned.

The position of the General Account on the 30th June, 1922, is shown below.

Head of Account.	Ledger Balances on 30th June, 1922.		
	Invested in Securities.	Cash Balances.	Total.
<b>Credit Balances—</b>	£	£	£
<b>Special Deposits Account—</b>			
Government Savings Bank Deposits Account .. ..	..	3,147,500	3,147,500
"          "    Advances Deposit Account .. ..	..	620,000	620,000
State Debt Commissioners' Trust Accounts .. ..	..	183,563	183,563
"          "    Deposit Account .. ..	..	166,632	166,632
Compensation—Liquor Amendment Act .. ..	..	364,233	364,233
Sydney Municipal Council Sinking Funds .. ..	..	28,932	28,932
Industrial Undertakings and Housing Fund .. ..	..	310,721	310,721
<b>Commonwealth Government Advances—</b>			
Returned Soldiers .. ..	..	9,811,441	9,811,441
Wheat Storage .. ..	..	250,000	250,000
Broken Hill Water Supply Administration .. ..	..	279,565	279,565
Treasury Fire Insurance Fund .. ..	29,000	195,692	224,692
Other .. ..	151,209	1,429,106	1,580,315
<b>Total Special Deposits Account.. Cr. £</b>	180,209	16,787,435	16,967,644
Closer Settlement Account .. ..	..	24,903	24,903
Public Works Account .. ..	..	253,137	253,137
<b>Special Accounts—</b>			
Colonial Treasurer's Supreme Court Moneys .. ..	..	524,189	524,189
Miners' Accident Relief Account .. ..	162,500	..	162,500
London Remittance Account .. ..	..	2,391,920	2,391,920
<b>Total .. .. Cr. £</b>	342,709	19,981,584	20,324,293
<b>Less Debit Balances—</b>	£		
Consolidated Revenue Account.. .. 3,578,263			
General Loan Account .. .. 10,461,290			
Loans Expenditure Suspense Account .. 585,966			
Public Works Expenditure Suspense Account 108,962			
Railway Store Suspense Account .. .. 283,378	..	15,154,305	15,154,305
Government Dockyard—			
Stores Advance Account .. .. 15,000			
Coal Purchase Suspense Account .. .. 105,446			
Government Printer—			
Stores Advance Account .. .. 16,000			
<b>Net Credit Balance .. .. Cr.</b>	342,709	4,827,279	5,169,988
<b>Deduct—Amounts not transferred to Public Accounts.. Dr.</b>	..	972,307	972,307
<b>Net Credit Balance in Sydney .. .. Cr.</b>	342,709	3,854,972	4,197,681
<b>Deduct—London Account .. .. Dr.</b>	..	2,391,920	2,391,920
<b>Net Balance .. .. Cr.</b>	342,709	1,463,052	1,805,761

The cash balance on the 30th June, 1922, was £1,463,052, distributed as follows:—

	£
Sydney—Net Credit .. ..	3,854,972
London—Net Debit .. ..	2,391,920
	£1,463,052

## INDUSTRIAL UNDERTAKINGS OF THE STATE.

In addition to the business undertakings, viz., Railways, Tramways, Harbour Trust, Water Supply and Sewerage, and the national undertaking, the Murrumbidgee Irrigation Scheme, the State controls various industrial undertakings, the revenue and expenditure of which do not form part of the Consolidated Revenue Fund, but are included principally under the Special Deposits Fund.

The following table shows the transactions of these undertakings during the year ended 30th June, 1922, and the total capital expenditure at that date.

Service.	Total Capital as determined by Committee.	Revenue.	Expenditure.			Net Revenue.
			Working Expenses, including Rates and Taxes.	Interest, Sinking Fund, &c.	Total.	
<b>INDUSTRIAL UNDERTAKINGS—</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>
Bakery .. .. .	21,794	31,070	29,754	868	30,622	457
Blue Metal Quarries—Kiana and Port Kembla .. .. .	144,504	232,460	217,239	7,180	224,419	8,041
Brickworks—Homebush Bay ..	106,312	142,890	121,115	10,828	131,943	10,947
Building Construction (including Maroubra Quarry) .. .. .	32,699	309,817	301,309	788	302,097	7,720
Clothing Factory .. .. .	13,635	85,234	78,263	707	78,970	6,264
Drug Depot .. .. .	189	30,872	30,241	10	30,251	621
Monier Pipe Works .. .. .	42,051	82,708	72,289	7,221	79,510	3,198
Motor Garage .. .. .	9,024	37,595	33,221	1,387	34,608	2,987
Power Station—Uhr's Point ..	32,505	7,798	6,807	1,742	8,549	(—) 751
Sawmills—Craven and Gloucester	66,918	80,845	84,645	3,197	87,842	(—) 6,907
Timber Yard, etc.—Uhr's Point	170,708	590,257	669,920	10,634	680,554	(—) 90,297
Trawlers .. .. .	206,793	102,411	156,389	10,350	166,739	(—) 64,328
<b>Total, Industrial Undertakings</b>	<b>856,132</b>	<b>1,733,966</b>	<b>1,801,192</b>	<b>54,912</b>	<b>1,856,104</b>	<b>(—) 122,138</b>
<b>OTHER SERVICES—</b>						
Housing Board .. .. .	993,983	64,644	17,069	49,596	66,665	(—) 2,021
Metropolitan Meat Board ..	1,853,212	599,154	436,998	38,102	475,101	34,053
Observatory Hill, Resumed Area	1,360,775	86,327	27,484	68,336	95,820	(—) 9,493
<b>Total, Other Services .. .. .</b>	<b>4,207,970</b>	<b>660,125</b>	<b>481,551</b>	<b>156,035</b>	<b>637,586</b>	<b>22,539</b>
<b>Grand Total .. .. .</b>	<b>5,064,102</b>	<b>2,394,091</b>	<b>2,282,743</b>	<b>210,947</b>	<b>2,493,690</b>	<b>(—) 99,599</b>

(—) Denotes net expenditure.

Some of the undertakings have consistently returned a profit while others have been conducted at a loss. The meat industry, brickworks, metal quarries, Monier pipeworks, bakery, and the building construction branch have been the principal profit producing concerns, while large losses have been sustained in connection with the trawling, timber, and saw-milling industries.

The operations of the building construction branch, which now includes the Maroubra quarry, were very successful in 1921-22, showing a net profit of £7,720. The total receipts, including value of works completed and in progress, were £309,817, and the expenditure, including interest and sinking fund, etc., amounted to £302,097. The trading profit was £8,508, or 26 per cent. of capital, and the result is very satisfactory, especially as wages and prices of materials were very high.

Brickworks also were carried on very profitably, notwithstanding that the products were sold at 18s. per thousand lower than prices of private makers. The favourable price induced the general public to patronise the Government yards to a considerable extent, no less than 22,790,000 bricks, or 55½ per cent. of the output being sold to private persons. The trading profit for the year 1921-22 was £21,775 (equal to 20·5 per cent. on capital employed), out of which a sum of £6,279 was paid as a bonus to employees, £1,922 as interest, £127 to sinking fund, and £2,500 to Special Reserve, leaving a balance of £10,947 to be carried forward.

Very heavy losses amounting to over £161,000 had to be met in connection with the trawling, timber, and saw-milling industries in 1921-22, while the operations of the Housing board, particularly in connection with the Observatory Hill area also showed a loss, but it should not be overlooked that this project was undertaken mainly with a view to the improvement of the city, and its benefits cannot be measured in money alone.

The following table shows for the last five years the capital invested in each of the existing undertakings, and the net profit or loss which resulted from its operations.

Establishment.	1916-17.		1920-21.		1921-22.	
	Capital Invested.	Net Profit.*	Capital Invested.	Net Profit.*	Capital Invested.	Net Profit.*
<i>Industrial Undertakings—</i>						
Bakery .. .. .	£ 16,474	£ 1,958	£ 19,803	£ 603	£ 21,794	£ 457
Brickworks—Homebush .. ..	88,853	3,672	92,471	9,615	103,312	10,947
Building Construction .. ..	31,026	9,229	31,250	9,892	32,099	7,720
Clothing Factory .. .. .	13,170	1,791	13,408	4,254	13,635	6,264
Drug Depot .. .. .	..	..	185	2,128	189	621
Metal Quarries .. .. .	86,531	8,700	123,004	1,788	144,504	8,041
Monier Pipe Works .. .. .	18,922	6,225	38,073	3,523	42,051	3,198
Motor Garage .. .. .	7,534	920	8,486	2,044	9,024	2,987
Power Station—Uhr's Point ..	32,610	(—) 2,752	32,492	(—) 2,291	32,505	(—) 751
Sawmills .. .. .	15,141	819	57,436	288	66,918	(—) 6,997
Timber Yard .. .. .	163,309	(—) 10,857	180,893	1,048	179,708	(—) 90,297
Trawlers .. .. .	127,631	(—) 12,866	195,055	64	206,793	(—) 64,328
Total Industrial Undertakings..	601,201	6,839	792,568	32,956	856,132	(—) 122,138
<i>Other Services—</i>						
Housing Board .. .. .	150,961	1,189	923,574	1,657	993,983	(—) 2,021
Metropolitan Meat Board .. ..	1,262,956	46,924	1,766,631	7,685	1,853,212	34,053
Observatory Hill Resumed Area..	1,336,595	(—) 6,067	1,338,464	(—) 10,884	1,360,775	(—) 9,493
Total Other Services .. .. .	2,750,512	42,046	4,028,669	(—) 2,162	4,207,970	22,539
Grand total .. .. .	3,351,713	48,885	4,821,237	30,794	5,064,102	(—) 99,599

\* After payment of interest on capital.

(—) Denotes loss.

Eight of the industrial undertakings showed a profit each year, amounting in all to £106,577, but the operations of the four last-mentioned in the table resulted in a loss of £188,920, so that during the five years there was a net loss of £82,343.

The following table shows the transactions of all State industrial undertakings during the years 1913-22, excluding the business undertakings (Railways, etc.) and the Murrumbidgee Irrigation area.

Year ended 30th June.	Capital Expenditure.	Revenue.	Expenditure.			Net Revenue.	Proportion of Net Revenue to Capital Expenditure.
			Working Expenses.	Interest, Sinking Fund, Depreciation, and Reserves.	Total.		
	£	£	£	£	£	£	per cent.
1913	1,497,072	268,571	221,148	53,205	273,353	(-) 4,782	(-) 0.32
1914	1,688,090	591,644	521,680	72,008	593,688	(-) 2,044	(-) 0.12
1915	1,875,251	873,434	755,464	93,019	849,483	3,951	0.21
1916	2,905,985	1,019,212	902,663	143,479	1,046,142	3,070	0.10
1917	3,421,687	1,266,398	1,085,776	138,678	1,224,454	41,944	1.22
1918	3,731,639	1,430,425	1,259,758	159,232	1,418,970	11,455	0.31
1919	3,518,025	1,475,526	1,310,025	185,143	1,495,168	(-) 19,642	(-) 0.56
1920	4,240,607	2,414,448	2,183,868	226,885	2,410,753	3,695	0.09
1921	4,821,237	2,194,471	1,970,682	192,995	2,163,677	30,794	0.63
1922	5,064,102	2,394,091	2,282,743	210,947	2,493,690	(-) 99,599	(-) 1.97

(-) Denotes net expenditure.

The capital expenditure debited to the Metropolitan Meat Board was reduced by £190,000 in 1919, and other adjustments of capital values were made by a committee appointed for the purpose.

The Murrumbidgee Irrigation area is of a national character, and has therefore been treated separately. The following table shows the transactions for the past six years:—

Year ended 30th June.	Capital Expenditure.	Revenue.	Expenditure.			Net Deficiency.	Proportion of net Deficiency to Capital Expenditure.
			Working Expenses.	Interest, Sinking Fund, &c.	Total.		
	£	£	£	£	£	£	per cent.
1917	3,855,503	248,170	272,080	170,428	442,508	194,338	5.04
1918	4,116,941	225,297	240,442	194,153	434,595	209,298	5.08
1919	4,336,319	310,045	313,428	210,485	523,913	213,868	4.93
1920	5,290,692	354,851	403,502	235,916	639,418	284,567	5.38
1921	6,090,681	359,498	400,355	267,289	667,644	308,146	5.05
1922	6,923,063	478,897	462,775	341,655	804,430	325,533	4.70

The revenue and working expenses shown are the gross amounts. For the year 1922 there was a net trading profit of £16,122, which, deducted from the interest and sinking fund liability, £341,655, gives a total loss for the year of £325,533. The principal losses in the year 1922 occurred in the House and Property Rents Accounts, the Accommodation Houses, and the Electrical Power-houses, while the services which showed the largest profits were the Canning Factory, the Nursery at Griffith, and the dry areas.

#### SPECIAL DEPOSITS AND SPECIAL ACCOUNTS.

The Special Deposits and Special Accounts form a very important division of the public finances, not only from the nature and volume of the transactions, but also by reason of the manner in which they are used in connection with the general finances of the State. These Funds are of great assistance in the banking operations of the Government, and they form a

strong reserve on which the Treasurer may draw in time of need. Although the Audit Act provides that the funds cannot be used except for the specific purpose for which they were deposited, it has been the custom for many years to draw on the balances for overdrafts of the Consolidated Revenue Fund and Loan Accounts if required. The great bulk of the funds bear interest, whether invested or not, and the power to use them enables the Government to effect a large saving in the interest which might otherwise be charged for accommodation from the banks. The following table shows the amount of these funds at 30th June in each year of the last decade:—

As at 30th June.	Amount.	As at 30th June.	Amount.	As at 30th June.	Amount.
	£		£		£
1913	6,134,067	1917	5,619,703	1920	9,848,520
1914	5,341,000	1918	5,957,608	1921	13,087,856
1915	5,259,710	1919	6,222,291	1922	17,491,833
1916	5,601,471				

The funds are divided into two classes, viz.:—Special Deposits Account and Special Accounts. The total of all moneys under these headings on the 30th June, 1922, was £17,491,833, viz., the Special Deposits Account, £16,967,644, and the Special Accounts £524,189. The amount at the credit of each account is shown in the following table:—

Government Savings Bank of New South Wales Deposit Account ... ..	£ 3,147,500	Water and Drainage Loan Redemption Fund ... ..	£ 81,536
Government Savings Bank of New South Wales Advances Deposit Account ... ..	620,000	Elder's Trustee and Executor Company, Limited ... ..	20,000
State Debt Commissioners' Deposit Account ... ..	166,632	Union Trustee Company of Australia, Limited ... ..	20,000
State Debt Trust Accounts ... ..	183,563	Government Dock, Newcastle—Store Advance Account ... ..	26,436
Public Works and Railway Construction Stores Advance Accounts ... ..	244,285	Unclaimed Salaries and Wages Account ... ..	9,374
Industrial Undertakings ... ..	210,761	Public Trustee — Unclaimed Balances ... ..	58,670
Sundry Deposits Account ... ..	826,717	Commonwealth Advances—Settlement of Returned Soldiers ... ..	9,811,441
Municipal Council of Sydney, Sinking Funds ... ..	28,932	Wheat Aet ... ..	250,000
Government Railways Superannuation Account ... ..	21,383	Territory Trust Account ... ..	463
Housing Fund ... ..	99,960	Metropolitan Water and Sewerage Board ... ..	14,393
Revenue Suspense Account ... ..	5,529	Hunter District Water and Sewerage Board ... ..	19,163
Broken Hill Water Supply Account ... ..	279,565	State Superannuation Board ... ..	4,722
Forestry (Act No. 55 of 1916) ... ..	37,183	Compensation Fund (Liquor Amendment Act) ... ..	364,283
Treasury Guarantee Fund ... ..	26,274	Other Accounts ... ..	62,482
Treasury Fire Insurance Fund ... ..	224,692		
Treasury Workmen's Compensation Fund ... ..	91,700		
"Sobraon" Fund ... ..	10,000	Total ... ..	£16,967,644

#### Special Accounts.

Master-in-Equity Account ... ..	£ 74,278	Prothonotary Account ... ..	£ 5,950
Master-in-Lunacy Account ... ..	15,315	Registrar of Probates' Account ... ..	18,433
Public Trustee Account ... ..	410,213	Total ... ..	£524,189

Grand Total, Special Deposits and Special Accounts, £17,491,833.



Of the total sum of £17,491,833 at the credit of the accounts on the 30th June, 1922, £180,209 was invested in securities; £5,016,667 was uninvested, but used in advances and on public account at interest, the rates allowed ranging from 1 to 4½ per cent.; the remainder, £12,294,957, was similarly used, but without any interest allowance.

The rate of interest paid by the Treasurer on the 30th June, 1922, was 3 per cent., with the following exceptions:—

Crown Leases Security Deposit Account	...	...	...	4 per cent.
Government Savings Bank of N.S.W. Deposit Account	...	4 and 4½	..	
"    "    Advances Deposit Account	...	4	..	
State Debt Commissioner's Trust Accounts, Municipal				
Council of Sydney Sinking Fund (50 Vic., No. 13)	...	4	..	
State Debt Commissioners' Deposit Account	...	4½	..	
Master-in-Equity and Master-in-Lunacy Accounts	...	1	..	

On the 30th June, 1922, the funds in the custody of the State Treasurer were held as follow:—

In Banks—	£
Special Deposits Account	16,787,435
Special Accounts	524,189
New South Wales Funded Stock	84,750
Commonwealth Inscribed Stock	6,000
Deposits on Tenders	58,415
Miscellaneous Securities	31,044
Total	£17,491,833

#### LOAN ACCOUNTS.

The following statement shows the amount of loans raised from the commencement of the Loan Account, in 1853, to the 30th June, 1922, and the proceeds available for expenditure, including the moneys credited to the Railways Loan Account:—

Treasury Bills, Debentures, Inscribed and Funded Stock sold	
to the 30th June, 1922	£279,939,742
Discount, Interest, Bonus, and Charges	10,022,165
Net amount raised	£269,917,577
Less Amount of Proceeds included in Public Debt, but not	
credited to Loan Accounts	5,107,862
Net amount available for Public Works, etc.	£264,809,715

On the 30th June, 1922, an amount of £103,265,355 had been redeemed, of which £9,696,211 was a charge on the Consolidated Revenue, leaving £176,674,387 outstanding at the close of the last financial year. This amount is exclusive of the liabilities on account of the Closer Settlement Fund debentures, reference to which is made on a subsequent page. The aggregate amount of interest actually paid by the State on loans to the 30th June, 1922, was £129,549,461 the liability during 1921-22 being £8,118,430.

The services to which the available sum of £264,809,715 was applied are shown in the following table. The redemptions are included in the total, as

although they are not items of expenditure on works and services, their inclusion is necessary to account fully for the total expenditure.

Reproductive Works :—						£	£
Railways...	...	...	...	...	...	91,884,734	
Tramways	...	...	...	...	...	9,965,901	
Water Supply	...	...	...	...	...	15,383,654	
Sewerage...	...	...	...	...	...	9,448,587	
Sydney Harbour Trust	..	...	...	...	...	9,497,242	
Darling Harbour Resumptions	...	...	...	...	...	1,342,662	
Industrial Undertakings	...	...	...	...	...	650,670	
Housing Fund	...	...	...	...	...	998,000	
Partly Productive Works :—							139,171,450
Conservation of Water, Artesian Boring, etc.	...	...	...	...	...	8,772,651	
Harbours and Rivers—Navigation	...	...	...	...	...	6,661,938	
Roads, Bridges, and Punts	...	...	...	...	...	2,188,038	
							17,622,627
Public Buildings and Sites, &c....	...	...	...	...	...	20,340,154	
Immigration	...	...	...	...	...	569,930	
Public Works in Queensland prior to separation	...	...	...	...	...	49,856	
Services transferred to Commonwealth—							20,959,940
Construction of Telegraph and Telephone Lines	...	...	...	...	...	1,297,583	
Post and Telegraph Offices	...	...	...	...	...	464,262	
Fortifications and Defence Works	...	...	...	...	...	1,457,536	
Lighthouses	...	...	...	...	...	144,288	
Customs Buildings	...	...	...	...	...	54,481	
Quarantine Buildings	...	...	...	...	...	18,099	
Government Dockyard—Cockatoo Island	...	...	...	...	...	502,988	
Naval Victualling Stores—Darling Harbour	...	...	...	...	...	26,450	
							3,965,687
Redemptions :—							£181,719,704
Loans repaid under various Acts	...	...	...	...	...	56,869,506	
Treasury Bills for Loan Services	...	...	...	...	...	36,681,795	
							93,551,301
							£275,271,005
Less Debit Balance, General Loan Account	...	...	...	...	...		10,461,290
Total							£264,809,715

The sum actually expended from loans on public works and services was £181,719,704, and an analysis shows that the proportional allocation of this amount was as follows:—Reproductive works, 76 per cent.; partly productive works, 10 per cent.; other, 12 per cent.; Commonwealth services, 2 per cent.

It will thus be seen that the proceeds of loans have been used judiciously, as most of the works are self-supporting, and have assisted materially in developing the State's resources, enhancing largely the value of the public estate.

The loan expenditure on account of various services during each of the five years ended 30th June is shown below:—

Head of Service.	1918.	1919.	1920.	1921.	1922.
	£	£	£	£	£
Railways ... ..	2,294,547	1,441,105	2,387,303	3,598,351	4,399,725
Tramways .. ..	117,561	102,752	202,652	426,687	389,792
Water Supply ... ..	691,006	515,984	732,333	1,404,709	1,232,467
Sewerage ... ..	257,030	182,946	310,330	317,890	463,611
Water Conservation and Irrigation ... ..	239,776	328,778	998,459	1,131,896	1,048,613
Harbours, Rivers, Wharves, and Docks ... ..	451,644	290,329	432,231	663,842	676,642
Public Works, Buildings, etc.—					
Public Abattoirs, Homebush	152,882	16,329	37,277	171,190	11,375
Other ... ..	67,561	55,952	63,458	33,312	123,924
Roads and Bridges ... ..	22,374	12,346	8,088	13,555	320,827
Pastures Protection Boards, for Wire-netting ... ..	...	7,206	26,187	43,568	6,307
Grain Elevator and Bulk Wheat Handling ... ..	40,797	523,375	643,021	815,556	548,629
Industrial Undertakings, including Housing Fund ... ..	65,864	43,429	453,449	320,878	80,823
Returned Soldiers' Settlement, etc. ... ..	230,654	417,957	1,506,246	1,438,456	710,437
Closer Settlement ... ..	...	...	1,000,000	2,758,000	1,500,000
Advances to Settlers for financial aid ... ..	...	...	16,318	1,659,078	...
All Other Services ... ..	26,381	36,558	29,981	6,702	9,872
Gross Expenditure... ..	4,658,077	3,975,046	8,847,333	14,803,670	11,523,044
Less Repayments to Credit of Votes ... ..	170,566	56,159	52,428	102,642	1,080,312
Net Expenditure on Public Works, etc. ... ..	£ 4,487,511	3,918,887	8,794,905	14,701,028	10,442,732
Loans repaid by New Loans (including Treasury Bills) ... ..	10,767	12,813,724	15,181,648	995,820	10,311,829
Total ... ..	£ 4,498,278	16,732,611	23,976,553	15,696,848	20,754,561

The loan expenditure, exclusive of redemptions, conversions, and renewals, is shown herewith for the period of thirty-nine years, 1842-1880, in decennial periods from 1881 to 1920, and to the end of the financial year 1921-22:—

Years.	During Each Period.		For Whole Period.	
	Amount.	Per Inhabitant.	Amount.	Per Inhabitant.
	£	£ s. d.	£	£ s. d.
1842-1880	16,316,529	41 12 2	16,316,529	21 9 11
1881-1890	27,639,022	29 8 8	43,955,551	39 3 7
1891-1900	20,515,704	16 6 8	64,471,255	47 12 1
1901-1910	26,876,468	18 0 4	91,347,723	56 11 11
1911-1920	65,228,221	35 5 8	156,575,944	78 6 5
*1921-1922	25,143,760	11 18 6	181,719,704	84 1 10

\*Two years only.

In explanation of the great increase in loan expenditure during the period 1911-20 it may be mentioned that 1,372 miles of railway were opened as against 832 in the preceding ten years, while there was enormous expenditure also in connection with the Murrumbidgee Irrigation scheme, Sydney Harbour Trust, the rapid extension of water and sewerage services, the

erection of silos and terminal elevator for handling wheat in bulk, meat abattoirs (Homebush), and Returned Soldiers and Closer Settlement schemes.

The total expenditure from loans on works and services now exceeds the public debt proper by £5,045,317. As a general rule, loans are renewed on maturity, and while the total actual expenditure increases each year, the outstanding debt may be increased or reduced according to the operations necessary to the flotation of new loans or the redemption of matured loans.

#### PUBLIC DEBT (PROPER).

The first loans raised by New South Wales were for the promotion of immigration. From 1831 to 1841 the expenses attached to immigration were met by the Land Fund, into which were paid the proceeds of land sales, but these proved insufficient for the purpose in 1841, and it became necessary to obtain additional funds.

It was, therefore, decided by the Governor to borrow on the security of the Territorial or Land Revenue, and a debenture loan of £49,000 was offered locally on the 28th December, 1841. The loan was issued during 1842 in two instalments, the nominal rates of interest being 5½d. and 4d. per cent., respectively, per diem. This was the first loan floated in Australia, as well as the first raised by an Australian Government. It was not until 1854 that a loan was placed on the London market.

Between 1842 and 1855 ten loans, amounting in all to £705,200, were raised for immigration purposes. Debentures representing £329,700 were redeemed from the Territorial Revenue, and the balance, £375,500, was taken over as a public liability upon the institution of Responsible Government.

The Public Debt proper in November, 1855, when Responsible Government was proclaimed, was £1,000,800, distributed under the following heads:—

Raised on the Security of Territorial Revenue—						£
Immigration	...	...	...	...	...	423,000
Sydney Railway Company's Loan	...	...	...	...	...	217,500
Raised on the Security of General Revenue—						
Amount for Sydney Sewerage	...	...	...	...	...	54,900
" " Sydney Water Supply	...	...	...	...	...	28,000
" " Railways	...	...	...	...	...	256,400
" " Public Works	...	...	...	...	...	21,000
Total	...	...	...	...	...	£1,000,800

The following table shows the amount of Public Debt outstanding at the end of each quinquennial period. The growth of the debt was not rapid until after the year 1880, but during the next five years twenty millions and a half were added to the total, and in the next quinquennium approximately thirteen millions. The greatest absolute addition in any of the quinquennial periods shown was made in the five years from 1910 to 1915, when over thirty-five millions were added to the total, and the greatest expenditure relative to population in the five years 1880-85.

Year.	Amount.	Year.	Amount.	Year.	Amount.
	£		£		£
1842	49,500	1875	11,470,637	1905	82,321,998
1845	97,900	1880	14,903,919	1910	92,525,095
1850	132,500	1885	35,564,259	1915	127,735,405
1855	1,000,800	1890	48,383,333	1920	152,776,082
1860	3,830,230	1895	58,220,933	1921	164,336,492
1865	5,749,630	1900	65,332,993	1922	176,674,387
1870	9,681,130				

The total debt quoted above and in subsequent tables, unless otherwise mentioned, is exclusive of Debentures and Ministerial certificates issued under Closer Settlement Acts, the amount at 30th June, 1922, being £4,121,936.

The following table shows the position of the public debt proper as at 30th June, 1913, and annually thereafter. The amount at 30th June, 1918, includes £10,076,000 floated in February, 1918, being part of a loan of £12,648,477 for redemptions due 1st September, 1918, which will explain the difference in the amount per head for the years 1917 to 1919.

As at 30th June.	Authorised to date.	Sold.	Redeemed.			Public Debt proper on 30th June.	
			From Con- solidated Revenue and Sinking Fund.	From General Loan Account, including Renewals.	Total.	Total.	Per Head.
	£	£	£	£	£	£	£ s. d.
1913	169,186,717	154,464,714	9,519,705	38,774,262	48,293,967	106,170,747	58 6 9
1914	183,018,817	165,746,770	9,519,705	39,532,034	49,051,739	116,695,031	62 5 1
1915	207,445,569	185,651,798	9,519,705	48,396,688	57,916,393	127,735,405	67 11 1
1916	220,603,887	191,244,436	9,519,705	51,210,713	60,730,418	130,514,018	68 19 8
1917	228,636,874	200,340,248	9,524,105	52,677,796	62,201,901	138,138,347	72 10 5
1918	245,493,790	214,797,361	9,524,105	52,688,563	62,212,668	152,584,693	78 11 4
1919	249,677,612	222,340,928	9,664,105	65,502,287	75,166,392	147,174,536	73 14 0
1920	279,207,980	244,715,885	9,696,211	82,243,592	91,939,803	152,776,082	73 17 3
1921	243,101,030	257,272,115	9,696,211	83,239,412	92,935,623	164,336,492	78 2 11
1922	319,848,244	279,939,742	9,696,211	93,569,144	103,265,355	176,674,387	82 4 1

In considering the figures relating to redemptions, the loans paid off from revenue or from sinking fund can alone be said to be absolutely redeemed. When an old loan is repaid from the proceeds of subsequent loans there is merely a change in the form of the liability, which up to the time of the war was accompanied frequently by some reduction of the interest charge, but recent renewals have had to be effected at a considerable increase in the rate of interest.

Prior to 1900 the State Government depended largely upon the London money market for the flotation of its loans, but during the last twenty years the requirements have been met to a much greater extent locally, as will be seen from the following statement, which shows the public debt proper on each register at quinquennial intervals from 1900 to 1920, and for the year 1921-2. Stocks may be transferred at any time from London to Sydney, and it should be noted that the amount registered in Sydney in 1920 and 1922 includes £7,400,000 advanced by the Commonwealth Government, which is repayable not later than 1925, and bears interest at 4½ per cent. approximately.

As at 30th June.	Registered in London.		Registered in Sydney.		Total Public Debt proper.
	Amount.	Proportion to Total Debt.	Amount.	Proportion to Total Debt.	
	£	per cent.	£	per cent.	£
1900	55,060,650	84.28	10,272,343	15.72	65,332,993
1905	64,007,650	77.75	18,314,448	22.25	82,321,998
1910	67,154,805	72.58	25,370,290	27.42	92,525,095
1915	86,167,288	67.46	41,568,117	32.54	127,735,405
1920	101,977,445	66.75	50,798,637	33.25	152,776,082
1922	118,396,120	67.01	58,278,267	32.99	176,674,387

From the above table it will be noted that the amount of liabilities held locally at the close of the financial year 1921-22 amounted to slightly less than one-third of the total indebtedness.

The annual payments under each head for interest and for expenses of the public debt since 1913 are shown below:—

Year ended 30th June.	Interest.	Re-demptions.	Expenses Connected With Management of Inscribed Stock.	Commission Paid to Financial Agents in England and New South Wales.	Interest and Charges paid.		Average Rate of Interest Payable on Debt.
					Total.	Per Inhabitant.	
	£	£	£	£	£	£ s. d.	per cent.
1913	3,516,233	450,602	19,990	1,511	3,988,336	2 6 1	3·54
1914	3,881,011	5,632	21,171	1,039	3,908,853	2 2 4	3·49
1915	4,125,600	5,688	21,394	1,492	4,154,174	2 4 1	3·60
1916	4,552,765	6,504	21,705	2,117	4,583,091	2 8 5	3·71
1917	4,914,211	6,868	22,297	1,991	4,945,367	2 12 3	3·81
1918	5,188,754	6,819	22,746	1,988	5,220,307	2 14 3	3·98
1919	5,462,991	6,833	20,861	2,382	5,493,067	2 15 0	4·10
1920	6,030,721	6,976	20,213	4,169	6,062,079	2 19 6	4·30
1921	6,601,894	2,566	21,102	5,506	6,631,068	3 3 6	4·42
1922	7,081,938	...	23,366	2,395	7,107,699	3 6 10	4·69

The interest paid during each year shown above is exclusive of payments on account of trust funds and special deposits held by the Government, and on closer settlement debentures.

The public debt is partly funded and partly unfunded, the former comprising debentures and inscribed and funded stocks, and Treasury bills constituting the latter. The amounts outstanding, and the annual interest payable on the 30th June, 1922, were as follow:—

Description of Stock.	Amount Outstanding.	Annual Interest Payable.
Debentures—	£	£
Matured ... ..	3,450	...
Still bearing Interest ... ..	14,543,130	709,591
Inscribed and Funded Stock—		
Matured ... ..	4,896	...
Still bearing Interest ... ..	154,263,711	7,078,986
Total, Funded Debt...	£168,815,187	£7,788,577
Treasury Bills—		
Matured ... ..	2,200	.....
Still bearing Interest ... ..	7,857,000	329,853
Total, Unfunded Debt	£7,859,200	£329,853
Total, Public Debt ... ..	£176,674,387	£8,118,430

The following table shows the total debt proper outstanding on 30th June, 1922, at each rate of interest, and the annual amount payable thereon.

Rate per cent.			Amount of Stock and Bills.	Annual Interest payable.
£	s.	d.	£	£
6	10	0	6,500,000	422,500
6	0	0	10,000,000	600,000
5	15	0	24,880,241	1,430,614
5	10	0	19,333,961	1,063,643
5	6	11	250,000	13,365
5	5	3	500,000	26,312
5	5	0	15,298,830	803,189
5	0	0	6,286,332	314,319
4	10	0	5,981,334	269,162
4	2	6	7,400,000	305,250
4	0	0	28,143,540	1,125,742
3	15	0	2,614,960	99,186
3	10	0	32,392,471	1,133,736
3	0	0	17,047,072	511,412
Matured...			10,546	...
Total			£176,674,387	£8,118,430

The whole of the loans on which the interest rate is higher than 4 per cent. have been floated since 1914; those at the highest rates are the most recent.

The rate given for the £7,400,000 outstanding at £4 2s. 6d. per cent. is approximate only, as it has not been fixed definitely.

#### DATES OF MATURITY.

The dates of repayment of the public debt proper extend to 1963, and the sums falling due for redemption each year vary considerably, as will be seen from the following table, which shows the due dates and the amount repayable in London and in Sydney:—

Due Date.	Registered in—		Total.
	London.	Sydney.	
	£	£	£
Matured	2,650	7,896	10,546
Minimum date expired	...	7,395,208	7,395,208
1922-23	6,900,000	3,611,757	10,511,757
1923-24	1,999,300	4,229,659	6,228,959
1924-25	16,427,055	21,276,148	37,703,203
1925-26	...	3,083,331	3,083,331
1926-27	5,997,100	12,605,767	18,602,867
1927-28	4,999,300	286,700	5,286,000
1928-29	...	4,000	4,000
1929-30	...	165,040	165,040
1930-31	...	3,268,170	3,268,170
1931-32	...	1,370,116	1,370,116
1932-33	13,056,904	19,096	13,076,000
1933-34	12,635,846	50,454	12,686,300
1934-35	4,999,120	880	5,000,000
1935-36	12,435,474	64,526	12,500,000
1940-41	16,480,065	19,935	16,500,000
1950-51	12,068,650	181,350	12,250,000
1962-63	10,393,456	106,544	10,500,000
Interminable	...	530,190	530,190
Permanent	1,200	1,500	2,700
Total	£ 118,396,120	58,278,267	176,674,387

The latest due date has been given in the table, but in several cases the loans may be redeemed earlier, subject to the Government giving notice to that effect, at periods ranging from three to twelve months.

The amounts shown in preceding tables do not represent the total liabilities of the State Government, as they are exclusive of Debentures and Ministerial Certificates issued for the purchase of estates under Closer Settlement Acts, Advances by the Commonwealth Government, Trust Funds and Special Deposits used by the Treasurer, and payments on Bank Accounts still to be transferred. Details of these items are shown below, and the corresponding figures for 1921 are included for purposes of comparison.

Liabilities.	As at 30th June, 1921.		As at 30th June, 1922.	
	£	£	£	£
Public Debt Proper ... ..	...	164,336,492	...	176,674,387
Debentures and Ministerial Certificates under Closer Settlement Acts ...	...	4,241,436	...	4,121,956
Trust Funds and Special Deposits used by Treasurer—				
Advances by Commonwealth—				
Soldiers' Settlement ...	6,256,983	...	9,811,441	...
Wheat Storage ... ..	250,000	...	250,000	...
	6,506,983	...	10,061,441	...
Accounts overdrawn, covered by Special Deposits and Special Accounts ... ..	4,480,560		4,652,324	
		10,987,543		14,713,765
Payments by Banks on Public Account still to be transferred ... ..	...	1,044,120	...	972,307
Total Liabilities ... ..	...	180,609,591	...	196,482,395
Per Head of Population ... ..	...	£85 17 9	...	£91 8 5

On the 30th June, 1922, the liabilities of the State, as shown above, were £196,482,395, but this amount should be decreased by advances to be repaid under the headings shown below:—

	£
Country Towns Water Supply ... ..	1,427,614
Country Towns Sewerage and Drainage ... ..	513,415
Water and Drainage Trusts ... ..	120,088
Other Services ... ..	125,053
Total ... ..	£2,186,170

There is also the property transferred to the Federal Government, valued at £3,965,687, on which interest is paid at  $3\frac{1}{2}$  per cent. per annum, and the balance at credit of the Sinking Fund, £417,067, so that the net amount of the liabilities is reduced to £189,913,471, and there is a further set-off in the sums repayable by settlers under Closer Settlement Acts, which, including arrears £368,727, amount to £9,944,121.

#### *Cost of Raising Loans.*

The charges incidental to the issue of loans in London are heavy. Operations are conducted by the Bank of England and by the London and West-



minster Bank, and the former charges  $\frac{1}{4}$  per cent. per £100 of stock on all loan issues, and £350 per million annually for the inscription and management of stock, including the payment of the half-yearly dividends; while the latter charges  $\frac{1}{4}$  per cent. and £150 per million respectively for similar services. In Sydney the Bank of New South Wales and the Commercial Banking Company of Sydney (Limited) transact all Government banking business. The former acts as the financial agent for the State in Victoria, and undertakes the payment of the half-yearly dividends on local debentures and funded stock. The Treasury directly conducts the operations connected with the issue of New South Wales Funded Stock and Treasury Bills, and no local loan has been underwritten.

Until the success of Commonwealth War Loans showed the possibilities of the Australian market, local issues were small.

The following statement shows the charges for the negotiation of loans floated during the period from 1914 to 1922, inclusive of the accrued interest and bonuses allowed to investors. Local Debentures and Treasury bills have not been included, as those disposed of in Sydney are usually sold at par, and little expenditure, if any, is incurred, while the securities under these headings negotiated in London are generally for short periods pending the flotation of long-dated loans.

Year when Floated.	Amount of Principal.	Gross Proceeds.	Charges, etc.					Expenses per £100 of Gross Proceeds.
			Stamp Duty, Postage, and other Expenses.	Bank Commission.	Paid to Investors—Interest Bonus and Discount Bonus.	Brokerage and Underwriting.	Total.	
	£	£	£	£	£	£	£	£ s. d.
Issued in London.								
1914	7,500,000	7,312,500	43,875	18,750	55,473	115,270	236,363	3 3 1
1915	7,000,000	6,965,000	23,310	17,500	9,015	106,553	156,378	2 4 11
1917	2,500,000	2,500,000	3,095	6,250	14,389	38,650	62,384	2 9 11
1918	19,076,000	19,001,900	42,135	47,690	41,219	223,027	354,071	1 17 3
1919	3,900,000	2,985,900	4,295	7,500	7,881	44,386	64,062	2 2 11
1919-20	5,000,000	4,910,000	6,918	12,500	11,240	68,995	99,653	2 0 7
1920-21	6,500,000	6,500,000	73,198	16,250	22,486	112,544	224,478	3 9 1
1921-22	3,000,000	2,865,000	9,735	7,500	8,527	51,851	72,613	2 10 8
	7,000,000	6,790,000	*	*	*	*	*	*
Issued in Sydney.								
1914	532,056	532,056	NIL	NIL	NIL	1,300	1,300	0 4 11
1917	1,770,154	1,770,154				2,110	2,110	0 4 8
1918	979,313	979,313				NIL	NIL	NIL
1919	1,492,367	1,492,367				"	"	"
1919-20	14,778,156	14,778,156				20,000	20,000	0 2 8
1920-21	5,309,000	5,309,000				12,000	12,000	0 4 6
1921-22	8,817,927	8,817,927				10,460	10,460	0 2 4

\* Not available.

The Sydney sales take place at the Treasury on the basis of £100 cash for every £100 of stock, and a commission of  $\frac{1}{2}$  per cent. is allowed when a broker is engaged. The cost of negotiation for issues in Sydney during the

past ten years was about 2s. 9d. per £100 of gross proceeds, whilst the average charges for London loans, including underwriting, were £2 8s. 10d.

#### STOCK QUOTATIONS.

The average market prices of stock in Sydney are shown in the following table for each month of the year 1921-22, the figures being taken from the *Sydney Stock and Share List*.

Date.	5½ per cent. Stock.	5½ per cent. Stock.	5 per cent. Stock.	4½ per cent. Stock.	4 per cent. Stock.	3½ per cent. Stock.	3½ per cent. Stock.	3 per cent. Stock.
1921—	£	£	£	£	£	£	£	£
July ... ..	95½	95	*	*	*	92½	92	59
August ... ..	95½	95½	90	*	93	91¾	*	*
September ... ..	95½	94¾	89	*	92½	91½	91½	50
October ... ..	93¾	94¾	90¾	*	92½	*	*	50
November ... ..	94¾	95	*	*	94½	*	*	50
December ... ..	94½	95½	90¾	*	*	94¾	*	50
1922—								
January ... ..	*	95½	*	*	*	*	*	50
February ... ..	*	95½	*	*	*	*	*	53
March ... ..	*	97	*	*	*	*	*	52
April ... ..	*	95½	*	*	*	*	*	53
May ... ..	*	95½	*	*	*	*	*	54½
June ... ..	*	96	*	*	*	*	*	54½

\* No quotations.

The only London prices available for the twelve months ended 30th June, 1922, as shown in the *Economist*, relate to the 5½ per cent. stock, which rose from 93 in July, 1921, to 98 in February, 1922, and the 5¾ per cent. stock, which was first quoted in February, 1922, at par, after which it fluctuated between that price and 101½, which was the maximum for the period.

#### REDEMPTIONS AND SINKING FUNDS.

Under the provisions of the State Debt and Sinking Fund Act, 1904, the State Debt Commissioners' Board was constituted, the members being the Treasurer, the Chief Justice, the Speaker of the Legislative Assembly, and the Under Secretary for Finance and Trade; and the Board controls certain trust funds and special accounts. The original Act provided for a general sinking fund, and a sum of £350,000 was paid each year to the credit of the fund, while under the Treasury Bills Deficiency Act, 1905, an additional £50,000 was required to be transferred to the fund whenever a sufficiently large surplus enabled this to be done. The Commissioners apply the credit balance in purchasing or paying-off stock, debentures, or Treasury bills; and they are empowered to invest the moneys in approved securities. The State Debt and Sinking Fund (Amendment) Act, 1914, provided that where at the close of a year there is a deficiency on the Consolidated Revenue Account the Commissioners shall repay any amount, not being greater than such deficiency, which had been issued from the fund to the Commissioners during

the year. Since the last-mentioned Act was passed the amount of £350,000 has been paid to the Commissioners each year, and has been returned to the Treasury.

The transactions under the Act for the financial year ended the 30th June, 1922, were as follow:—

RECEIPTS.						£
Annual Contribution from Consolidated Revenue Fund ...	...	...	...	...	...	350,000
Country Towns Water Supply ...	...	...	...	...	...	7,792
Country Towns Sewerage ...	...	...	...	...	...	2,508
						<hr/> 10,300
Interest—Funded Stock ...	...	...	...	...	...	9,402
Deposit with Colonial Treasurer...	...	...	...	...	...	4,368
						<hr/> 13,770
Balance brought forward from 1920-21 ...	...	...	...	...	...	409,988
						<hr/>
Total ...	...	...	...	...	...	£784,058

EXPENDITURE.						£	£
Annual contribution from Consolidated Revenue Fund ..	...	...	...	...	...	350,000	
Redemption of Funded Stock matured 10th August, 1921, (face value £17,843.)							16,991
Balance carried forward to 1921-22—							
Invested in N.S.W. Funded Stock ...	...	...	...	...	...	250,370	
On Deposit with Colonial Treasurer ...	...	...	...	...	...	166,633	
On Account Current ...	...	...	...	...	...	64	
						<hr/> 417,067	
Total ...	...	...	...	...	...	£784,058	

#### FINANCIAL RELATIONS BETWEEN THE STATES AND THE COMMONWEALTH.

The relations between States and Commonwealth are such that neither can truly gain by obtaining advantage over the other. The affairs of each are so intertwined that if one be hampered the other must be affected also, and the development of Australia, on which both are dependent, will be retarded.

One of the most difficult problems to be solved in formulating a constitution for the Commonwealth of Australia was the determination of the relative shares of the Commonwealth and States respectively in the proceeds of taxation from Customs and Excise. Each of the two governing powers was invested with authority to levy direct taxation, consequently no difficulty arose in this respect; but the power to impose tariffs through Customs and Excise duties, formerly exercised by the State, was at Federation vested in the Commonwealth Parliament. Hence it became necessary to decide some proportion of the revenue derivable from these sources of indirect

taxation which should constitute by legal right the share of the States *qua* States in these imposts.

From the time when the Federal Constitution was under discussion to the time when the Surplus Revenue Act was passed in 1910, it was universally admitted that in any arrangement between the Commonwealth and the States the proportion of Customs and Excise Revenue to be retained by the one, and the proportion to be handed back to the other, should be based on the respective needs of each. Practically the only difference of opinion was whether expenditure on such services as it has been the public policy of the States or Commonwealth to undertake, and which are called "Business Undertakings" in New South Wales, should be included in the "needs," or whether it should be premised that they should pay for themselves.

It was in recognition of these needs that it was provided by section 87 of the Commonwealth Constitution Act, popularly known as the "Braddon" clause, that during the first ten years of the existence of the newly-created Australian Commonwealth there should be returned not less than three-fourths of the net revenue from Customs and Excise to the State in which it was received; also, that such proportion should continue to be returnable after the ten-year period until the Commonwealth Parliament should decide what other disposition of these revenues should be made.

During the early years of the experience of the Commonwealth the question of the policy to be pursued at the expiry of the period of ten years named in the Braddon clause was not immediately pressing, because (1) the needs of the Federation had not become sufficiently urgent to cause a necessity for appropriating the full quarter allocated for Commonwealth requirements until 1st July, 1908, and (2) the fact that a term of years had yet to ensue before a fresh arrangement could be made under the Constitution, tended to the postponement of the determination of a question which was fully recognised to be intricate and difficult of solution.

Towards the close of the ten-year period, however, it became evident that more revenue would be required to enable the Federal Government to fulfil its assigned functions. A number of conferences were held, but until the year 1909 a definite agreement was not reached. In that year it was agreed that the amount to be returned should be 25s. per head of population, and the original proposal was that the Constitution should be altered to provide that payment. At a referendum, however, the proposal was defeated by a small majority, and the Surplus Revenue Act of 1910 was passed by the Commonwealth Parliament. The Act provides that for ten years, from 1st July, 1910, and thereafter, until Parliament provides otherwise, the Commonwealth shall pay to each State by monthly instalments an annual sum amounting to 25s. per head of its population.

This measure was a temporary expedient, and the matter has been discussed at length by representatives of the Government of the Commonwealth and of the States many times without reaching finality. A conference of Premiers was held in May, 1920, and continued in July, and other meetings have been held since that date, but although the parties arrived at satisfactory agreements upon several important matters, some involving heavy expenditure, they were unable to agree upon the two most important questions of finance, namely, the co-ordination of borrowing, and the per capita payment to the States.

It is interesting to consider the following table, which shows, taking the combined expenditure of the Commonwealth and States on administrative

or governmental functions, that is, exclusive of business undertakings, the proportion of the total expenditure which was incurred by the States and by the Commonwealth in 1901-2, the first year of the Commonwealth, in 1909-10, the year before the commencement of the Surplus Revenue Act, in 1913-14, the year before the War, and in 1921-22, the latest year. The table shows also the proportion of Customs and Excise revenue retained by the Commonwealth in each of those years:—

Year.	Proportion of Total Expenditure (exclusive of Business Undertakings).		Proportion of Customs and Excise retained by Commonwealth.
	By States.	By Commonwealth.	
	per cent.	per cent.	per cent.
1901-02 ...	85	15	15
1909-10 ...	79	21	25
1913-14 ...	73	27	56
1921-22 ...	77	23	75

The expenditure by the Commonwealth on war services in 1921-22 has not been included for the purposes of this statement, as there was no similar expenditure in the earlier years.

The following statement shows the extent to which the States' revenues are dependent on the per capita payments from the Commonwealth. It gives the proportion per cent. from the revenue (excluding business undertakings) of each State from the principal sources in 1921-22, and it is obvious that if the Commonwealth payments were reduced materially the States could balance their accounts only by severe economy or by heavy increases in taxation.

The receipts of business undertakings have been excluded on the assumption that the charges for those services should be fixed to meet the expenditure thereof.

State.	Proportion of Revenue obtained from—				
	Commonwealth Payments.	Taxation.	Land.	All Other Sources.	Total.
	per cent.	per cent.	per cent.	per cent.	per cent.
New South Wales ...	18·9	52·1	14·5	14·5	100
Victoria ...	22·5	41·2	3·7	32·6	100
Queensland ..	13·3	48·0	21·7	17·0	100
South Australia ...	17·3	49·5	8·0	25·2	100
Western Australia ...	16·9	26·8	13·2	43·1	100
Tasmania ...	22·5	45·9	5·8	25·8	100
All States ...	18·5	46·2	12·3	23·0	100

The next statement shows the principal items of revenue and expenditure of the States and of the Commonwealth for the year 1921-22, and is included

to show the relation of the various States to each other, and of all the States to the Commonwealth.

Heading.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	All States.	Commonwealth.
<i>Revenue.</i>								
	£	£	£	£	£	£	£	£
GOVERNMENTAL—								
Payments by Commonwealth .. ..	2,632,036	1,918,967	951,178	621,862	554,704	†355,238	7,033,985	..
Taxation—								27,630,359
Customs and Excise .. ..	4,077,397	1,443,209	2,194,361	975,043	320,574	355,035	9,366,419	16,790,682
Income Tax .. ..	2,490	372,060	480,518	162,104	42,549	97,031	1,156,752	2,284,040
Land Tax .. ..	907,307	706,181	*604,739	197,764	76,817	61,142	2,553,950	991,378
Probate Duties .. ..	2,261,325	993,726	149,678	443,666	440,919	214,493	4,494,805	2,082,383
Other .. ..	7,240,017	3,515,176	3,420,296	1,778,577	881,159	727,701	17,571,926	49,778,842
Total Taxation .. ..	2,008,820	320,728	1,549,063	285,760	435,188	91,989	4,691,548	..
Land .. ..	923,915	790,297	140,140	372,640	961,655	276,444	8,465,091	213,360
Other Public Services .. ..	1,091,704	1,962,868	1,071,291	533,787	453,875	132,411	5,275,936	5,368,737
Other Revenue .. ..	13,905,492	8,538,036	7,131,968	3,592,626	3,286,581	1,583,783	38,038,486	55,360,939
Total Governmental .. ..	21,732,328	11,333,431	5,179,410	4,179,126	3,620,526	597,612	46,642,433	9,536,107
Business Undertakings .. ..	35,637,820	19,871,467	12,311,378	7,771,752	6,907,107	2,181,395	84,680,919	61,897,046
Total Revenue .. ..								
<i>Expenditure.</i>								
GOVERNMENTAL—								
Administrative and Departmental .. ..	13,688,556	6,418,137	4,264,429	2,820,477	2,732,525	1,019,919	30,944,043	5,577,824
Interest, excluding Business Undertakings .. ..	1,604,687	1,406,256	1,167,689	533,284	624,591	404,149	5,740,656	1,246,951
Sinking Fund and Redemptions .. ..	..	320,489	61,652	139,614	281,060	101,011	903,826	32,478
Defence .. ..	..	..	..	..	..	..	..	4,182,488
War Services, including Pensions and Interest .. ..	..	..	..	..	..	..	..	20,136,541
Total Governmental .. ..	15,293,243	8,144,882	5,493,770	3,493,375	3,638,176	1,525,079	37,588,525	40,176,292
BUSINESS UNDERTAKINGS—								
Working Expenses .. ..	15,530,763	8,610,993	4,887,793	2,793,540	2,587,391	548,510	34,966,990	8,173,231
Interest and Sinking Fund .. ..	6,142,519	3,080,653	2,118,407	1,539,326	1,413,675	228,488	14,523,068	531,709
Total Business Undertakings .. ..	21,673,282	11,691,646	7,006,200	4,332,866	4,001,066	776,998	49,482,058	8,705,000
New Works .. ..	..	..	..	..	..	..	..	2,571,794
Payments to States .. ..	..	..	..	..	..	..	..	7,035,535
Total Expenditure .. ..	36,966,525	19,836,528	12,499,970	7,826,241	7,039,242	2,302,077	87,070,583	58,488,621

\* Includes other Stamp Duties—not shown separately.

† Includes £85,000, special grant.

In the above table the amounts shown as expended as interest on the capital expenditure on business undertakings were known absolutely in some of the States, but were estimated for the other States, where the information is not known definitely, on the assumption that the average rate of interest on the whole public debt was the rate on the loan expenditure of these undertakings.

The administrative and departmental services of the State comprise such important matters as education, hospitals and charities, police and law, local government, lands, mines, agriculture, and forestry; and of the Commonwealth, invalid and old age pensions, maternity allowances, defence, and trade and customs.

Relatively to population, the heads of revenue and expenditure of each State separately, of all the States combined, and of the Commonwealth, in 1921-22 are as follow:—

Heading.	Per head of population.							
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	All States.	Commonwealth.
<i>Revenue.</i>								
GOVERNMENTAL—	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Payments by Commonwealth .. ..	1 4 9	1 4 9	1 4 9	1 4 9	1 13 1	1 12 6	1 5 7	....
Taxation—								
Customs and Excise .. ..	....	....	....	....	....	....	....	5 0 4
Income Tax .. ..	1 18 4	0 18 7	2 17 0	1 18 10	0 19 2	1 12 7	1 14 0	3 0 11
Land Tax .. ..	....	0 4 10	0 12 6	0 6 5	0 2 6	0 8 11	0 4 2	0 8 8
Probate Duties .. ..	0 8 6	0 9 1	0 15 8	0 7 10	0 4 7	0 5 6	0 9 4	0 3 7
Other .. ..	1 1 4	0 12 10	0 3 8	0 17 8	1 6 4	0 19 8	0 16 4	0 7 7
Total Taxation .. ..	3 8 2	2 5 4	4 8 10	3 10 9	2 12 7	3 6 8	3 3 10	9 0 8
Land .. ..	0 18 10	0 4 2	2 0 3	0 11 4	1 5 11	0 8 5	0 17 0	....
Other Public Services .. ..	0 8 8	0 10 2	0 3 7	0 14 10	2 17 5	1 5 4	0 12 7	0 0 9
Other Revenue .. ..	0 10 3	1 5 8	1 7 10	1 1 3	1 7 1	0 12 1	0 19 2	0 19 6
Total Governmental .. ..	6 10 8	5 10 1	9 5 3	7 2 11	9 16 1	7 5 0	6 18 2	10 0 11
Business Undertakings .. ..	10 4 4	7 6 2	6 14 6	8 6 4	10 16 1	2 14 9	8 9 6	1 14 8
Total Revenue .. ..	16 15 0	12 16 3	15 19 9	15 9 3	20 12 2	9 19 9	15 7 8	11 15 7
<i>Expenditure.</i>								
GOVERNMENTAL—								
Administrative and Departmental .. ..	6 8 9	4 2 9	5 10 9	5 12 3	8 3 1	4 13 5	5 12 5	1 0 8
Interest, excluding Business Undertakings .. ..	0 15 1	0 18 2	1 10 4	1 1 3	1 17 3	1 17 0	1 0 10	0 4 6
Sinking Fund and Redemptions .. ..	....	0 4 2	0 1 8	0 5 6	0 16 9	0 9 3	0 3 4	0 0 2
Defence .. ..	....	....	....	....	....	....	....	0 15 2
War Services, including Pensions and Interest .. ..	....	....	....	....	....	....	....	5 5 9
Total Governmental .. ..	7 3 10	5 5 1	7 2 9	6 19 0	10 17 1	6 19 8	6 16 7	7 5 10
BUSINESS UNDERTAKINGS—								
Working Expenses .. ..	7 6 0	5 11 0	6 6 11	5 11 2	7 14 5	2 10 3	6 7 0	1 9 8
Interest and Sinking Fund .. ..	2 17 8	1 19 9	2 15 0	3 1 3	4 4 4	1 0 11	2 12 9	0 1 11
Total Business Undertakings .. ..	10 3 8	7 10 9	9 1 11	8 12 5	11 18 9	3 11 2	8 19 9	1 11 7
New Works .. ..	....	....	....	....	....	....	....	0 9 4
Payments to States .. ..	....	....	....	....	....	....	....	1 5 6
Total Expenditure .. ..	17 7 6	12 15 10	16 4 8	15 11 5	22 15 10	10 10 10	15 16 4	10 12 3

The payments by the Commonwealth to all the States in 1921-22 represented 25s. 6d. per head of population, the excess of 6d. per head over the 25s. mentioned above being due to a special payment to Western Australia, and a special grant of £85,000 to Tasmania. Under the Surplus Revenue Act of 1910 a moiety of the special payment to Western Australia is deducted from the amounts payable to the State at the rate of 25s. per head, so that the sum actually paid to New South Wales in 1921-22 represented only 24s. 9d. per head.

The Commonwealth Constitution Act of 1901 empowered the Commonwealth to take over from the States their public debts as existing at the establishment of the Commonwealth. In 1910 a proposed law to alter the Constitution so as to authorise the transfer of all the debts incurred by the States was ratified by means of a referendum, but no further action has been taken.

The public debts of the States as at 30th June, 1922, amounted to £502,758,691, and of the Commonwealth to £416,070,509, of which £367,574,753 was incurred on account of the war. The following table shows the public debt of each State and of the Commonwealth, also the total amount of interest payable. In the statement on page 84 relating to the finances of the States and Commonwealth, the interest payable appears partly under Governmental Services and partly under Business Undertakings.

State.	Public Debt.†		Interest Payable.	
	Total.	Per Head.	Total.	Per Head.
	£	£ s. d.	£	£ s. d.
New South Wales... ..	*176,674,387	82 4 1	*8,118,430	3 15 8
Victoria ... ..	109,099,199	69 14 5	4,469,678	2 17 3
Queensland... ..	85,691,228	110 0 0	3,286,096	4 2 5
South Australia ... ..	54,388,688	107 2 2	2,560,820	5 0 10
Western Australia ... ..	54,959,778	162 11 3	2,156,311	6 7 7
Tasmania ... ..	21,945,411	99 8 8	817,644	3 14 1
All States ... ..	502,758,691	92 5 6	21,408,979	3 17 1
Commonwealth—				
War Debt ... ..	367,574,753	66 2 2	18,065,317	3 5 0
Other ... ..	48,495,756	8 14 5	2,306,326	0 8 4
Total Commonwealth ... ..	416,070,509	74 16 7	20,371,643	3 13 4
Grand Total ... ..	918,829,200	167 2 1	41,780,622	7 10 5

\* Exclusive of Closer Settlement Debentures.

† Gross amount—Sinking Funds not deducted.

The Public Debt of the States as shown above appears large, but no less than 74 per cent. of the total amount, ranging from 58 per cent. in Western Australia to 83 per cent. in New South Wales, has been spent on works of a reproductive character, such as railways, tramways, water supply, sewerage, harbours, and rivers. The balance of the debt has been expended on other necessary works or services, namely, roads, bridges, industrial undertakings, promotion of agriculture, assistance to returned soldiers, aid to farmers, and other matters, which, although not returning direct revenue, have assisted in the development of the States.

War expenditure accounts for 88 per cent. of the Commonwealth debt.

In so far as a comparison between the various States is concerned, the Victorian Public Debt, to be on the same basis as that of the other States, should be increased by £15,358,989, representing loans raised by the Melbourne Metropolitan Board of Works, the Melbourne Harbour Trust, and the Geelong Harbour Trust, to construct necessary works. Amounts corresponding to that are included in the quotations for the other States, and if that were added as stated, the Victorian Public Debt would be £124,458,188, or £79 13s. 11d. per head, and the annual interest payment thereon would be £5,235,947, or £3 7s. 1d. per head.



## RAILWAYS AND TRAMWAYS.

THE first two projects for the construction of railways in New South Wales originated with private companies, but it was soon recognised that the undertakings were beyond their financial resources, and the works were transferred to the Government. Since then it has been an established policy that all railways shall be under Government control, although a few private lines have been constructed purely for local purposes. One result of this policy is to be seen in the magnitude of the annual receipts and expenditure of the State, and in the growth of the public debt. More than 52 per cent. of the expenditure in 1921-22 was in connection with railways and tramways, and nearly 58 per cent. of the public debt has been expended in their construction and equipment.

The management is in the hands of a Chief Commissioner and of three Assistant Commissioners, whose duties are allotted by the Governor upon the recommendation of the Chief Commissioner. The third Commissionership is at present vacant.

On 26th September, 1855, the first railway line, 14 miles in length, was opened for traffic between Sydney and Parramatta, and communication was established between Newcastle and East Maitland on 11th April, 1857.

The progress in construction of the State railways may be traced in the table given below. Included in the mileage are the Campbelltown-Camden, and Yass tramways, which are worked with the railways.

Period.	Opened during the period.	Total opened at end of period.	Period.	Opened during the period.	Total opened at end of period.
	miles.	miles.		miles.	miles.
1855-64	143	143	1905-14	686	3,967
1865-74	260	403	1915-19	858	4,825
1875-84	1,215	1,618	1920	190	5,015
1885-94	883	2,501	1921	28	5,043
1895-1904	780	3,281	1922	73	5,116

In addition to the mileage shown above there were at 30th June, 1922, 1,031 $\frac{1}{4}$  miles of sidings and crossovers.

The progress can be gauged fairly by comparing the population and area of territory to each mile of line open for traffic at different periods. In 1900 the average population per mile of line was 482, and in 1922 it was 420, while the area of territory has decreased from 434 square miles in 1860 to 60 square miles in 1922. The following statement shows the extension of railway facilities since 1860.

Year.	Population to each Mile of Line open.	Area to each Mile of Line open.	Year.	Population to each Mile of Line open.	Area to each Mile of Line open.
	No.	sq. miles.		No.	sq. miles.
1860	4,979	4,434	1895	501	123
1865	2,861	2,170	1900	482	110
1870	1,471	916	1905	443	95
1875	1,360	710	1910	443	85
1880	881	366	1915	455	75
1885	548	179	1920	406	62
1890	523	142	1922	420	60

## DUPLICATION OF LINES.

In addition to increasing the facilities by the construction of new lines, provision for the rapidly extending traffic is being made by the duplication of existing main lines.

There are duplicate lines on the main western line as far as Bowenfels, and works now in progress will extend the duplication to Orange; already those portions between Cox's River and Kelso, Gresham and Murrumbidgee, are completed; the southern line is duplicated as far as Cootamundra North Junction, the northern line as far as Braxton, and all the South Coast line, except certain tunnels.

The following statement shows the length of line laid with one or more tracks at intervals since 30th June, 1900 :—

At 30th June.	Single.	Double.	Triple.	Quadruple.	Total.
	miles.	miles.	miles.	miles.	miles.
1900	2,644	158½	...	8½	2,811½
1905	3,079½	193	...	8½	3,280½
1910	3,393	241½	...	8½	3,643
1915	3,692½	406½	8	27½*	4,134½
1920	4,405	567	7½	35½*	5,015
1922	4,494	579	7½	35½*	5,116

\* Includes 1 mile 9 chains, with five tracks.

## COST OF RAILWAY CONSTRUCTION.

The average cost per mile open for traffic of the Government Railway lines, excluding expenditure for rolling stock, machinery, furniture, and workshops and stores, has been £12,952—an amount which is by no means high, considering the character of some parts of the country through which the lines have been carried, and the cost of labour.

The amount expended on rolling stock, &c., to 30th June, 1922, was £19,289,373, viz.:—Rolling stock, £15,081,422; machinery, £1,342,014; workshops, £1,091,828; furniture, £11,109; and stores advance account, £1,763,000. The total capital expenditure amounted to £85,552,871, an average of £16,722 per mile. The growth of the capital expenditure may be seen in the following table:—

Period.	Capital expended during period.	Total capital expended to end of period.	Period.	Capital expended during period.	Total capital expended to end of period.
	£	£		£	£
1855-9	1,278,416	1,278,416	1895-9	2,137,005	37,992,276
1860-4	1,353,374	2,631,790	1900-4	4,296,241	42,288,517
1865-9	2,049,539	4,681,329	1905-9	5,324,149	47,612,666
1870-4	2,163,217	6,844,546	1910-4	13,652,203	61,264,869
1875-9	3,561,949	10,406,495	1915-9	15,336,722	76,601,591
1880-4	9,673,643	20,080,138	1920	2,717,326	79,318,917
1885-9	9,759,029	29,839,167	1921	2,985,277	82,304,194
1890-4	6,016,104	35,855,271	1922	3,248,677	85,552,871

Of the £85,552,871 expended to 30th June, 1922, an amount of £659,930 has been provided from the Consolidated Revenue of the State, leaving a balance of £84,892,941 which has been raised by the issue of debentures and other stock. The net revenue for the year ended 30th June, 1922, after paying working expenses, was £4,096,717, which gave a return of 4·88 per cent. upon the total capital expenditure.

## COACHING AND GOODS TRAFFIC.

For the first ten years after the opening of the railways in New South Wales the larger part of the earnings was obtained from the passenger traffic, no doubt owing to the fact that the original lines were entirely suburban. It was not until the line crossed the mountains and opened up the interior that the proportions changed, and the goods traffic became the principal source of revenue.

The following table gives the proportion of earnings from the coaching and goods traffic at intervals since 1890. The percentages shown for coaching include earnings from miscellaneous sources and rents.

Year ended 30th June.	Proportion of Total Earnings.		Year ended 30th June.	Proportion of Total Earnings.	
	Coaching, &c.	Goods and Live Stock.		Coaching, &c.	Goods and Live Stock.
	per cent.	per cent.		per cent.	per cent.
1890	40·2	59·8	1910	39·9	60·1
1895	35·5	64·5	1915	44·7	55·3
1900	38·8	61·2	1920	47·7	52·3
1905	39·9	60·1	1922	47·5	52·5

*Coaching Traffic.*

The following table shows the number of passenger journeys and the receipts from coaching traffic since 1890 :—

Year ended 30th June.	Passenger Journeys.	Gross Earnings from Coaching Traffic.	Per head of population.	
			Passenger Journeys.	Gross Earnings from Coaching Traffic.
	No.	£	No.	s. d.
1890	17,071,945	1,041,607	15·8	19 3
1895	19,725,418	1,001,107	15·9	16 2
1900	26,486,873	1,195,496	19·7	17 6
1905	35,158,150	1,428,190	24·4	19 10
1910	53,644,271	2,124,292	33·6	26 7
1915	88,774,451	3,315,294	47·1	35 2
1920	114,654,660	5,714,131	56·3	56 1
1922	121,298,861	7,231,553	57·0	68 0

Particulars regarding the passenger traffic on suburban and country lines during the years 1917 and 1922 are shown below ; suburban lines include distances within 34 miles of Sydney and Newcastle :—

Description.	Year ended 30th June, 1917.			Year ended 30th June, 1922.		
	First Class.	Second Class.	Total.	First Class.	Second Class.	Total.
<b>SUBURBAN LINES.</b>						
Ordinary Passengers ...	6,149,239	29,019,841	35,169,080	5,066,104	39,000,905	44,067,009
Season Ticket Holders ...	...	...	...	...	...	...
Journeys ...	8,752,860	19,978,522	28,731,382	9,260,220	24,964,000	34,224,220
Workmen's Journeys ...	...	22,854,648	22,854,648	...	32,639,616	32,639,616
Total Passenger Journeys	14,902,099	71,853,011	86,755,110	14,326,324	96,595,521	110,921,845
Miles Travelled ...	104,466,246	550,394,469	654,860,715	101,196,158	703,789,451	804,985,609
Average Mileage per Passenger ...	7·01	7·66	7·55	7·06	7·29	7·26
Amount Received from Passengers ...	£ 243,446	800,007	1,043,453	382,277	1,799,753	2,182,030
Average Receipts per Passenger per mile ...	d. 0·56	0·35	0·38	0·91	0·61	0·65
<b>COUNTRY LINES.</b>						
Passengers ...	2,462,419	7,492,317	9,954,736	2,267,682	8,109,334	10,377,016
Miles travelled ...	316,858,782	501,987,739	818,846,521	312,174,188	493,459,153	805,633,341
Average Mileage per Passenger ...	128·88	67·00	82·26	137·66	60·85	77·64
Amount Received from Passengers ...	£ 977,906	1,180,808	2,158,714	1,547,866	2,204,720	3,752,586
Average Receipt per Passenger per Mile ...	d. 0·74	0·56	0·63	1·19	1·07	1·12

*Goods Traffic.*

The following figures show how greatly the goods traffic has expanded, especially in recent years :—

Year ended 30th June.	Goods and Live Stock Traffic.		Per head of Population.	
	Tonnage.	Gross Earnings.	Tonnage.	Gross Earnings.
		£		£ s. d.
1890	3,788,950	1,569,356	3·5	1 9 0
1895	4,075,093	1,855,187	3·3	1 9 11
1900	5,531,511	1,936,217	4·1	1 8 5
1905	6,724,215	2,213,105	4·7	1 10 9
1910	8,393,038	3,290,640	5·3	2 1 3
1915	11,920,881	4,206,234	6·3	2 4 8
1920	13,293,528	6,807,792	6·5	3 6 10
1921	15,563,131	7,270,856	7·4	3 9 7
1922	14,532,811	7,981,466	6·8	3 15 0

The tonnage carried in 1922 was 1,000,000 tons less than in 1921, but the gross earnings were £700,000 greater. The next statement shows the class of goods carried on the railways since 1900.

Year ended 30th June.	General Merchandise.		Wool.	Live Stock.	Minerals.		Total Goods
	Grain, Flour, etc. (Up Journey).	Other.			Coal, Coke, and Shale.	Other.	
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1900	361,052	1,151,564	84,678	188,595	3,406,769	338,853	5,531,511
1905	522,755	1,398,443	90,572	174,424	4,169,076	368,945	6,724,215
1910	608,405	2,100,203	138,779	463,669	4,553,965	528,017	8,393,038
1915	482,876	2,849,908	132,895	849,604	6,649,704	955,894	11,920,881
1920	764,457	3,685,983	117,171	900,933	6,732,859	1,092,125	13,293,528
1921	1,216,834	3,375,443	93,760	732,804	3,881,796	1,262,494	15,563,131
1922	1,651,994	3,015,040	128,085	603,067	7,491,001	1,307,368	14,197,055

The following table contains information relating to ton mileage in 1913 and later years :—

Year ended 30th June.	Goods Train Mileage. (000 omitted.)	* Tons Carried. (000 omitted.)	† Ton-miles. (000 omitted.)	Earnings, exclusive of Terminal Charges.	Average Freight- paying Load carried per Train.	Average Miles per Ton.	Earnings per Ton- mile.	Density of Traffic per aver- age mile Worked.
				£	Tons.		d.	Tons.
1913	9,517	11,402	861,940	3,153,626	90·57	75·60	0·88	222,608
1914	10,469	12,901	1,037,911	3,760,384	99·14	80·45	0·87	262,165
1915	10,321	11,660	916,923	3,633,613	88·84	78·64	0·95	226,010
1920	11,698	13,010	1,394,099	6,106,563	119·17	107·15	1·05	280,729
1921	11,491	15,262	1,418,386	6,501,914	123·43	92·94	1·10	282,603
1922	10,508	14,197	1,365,961	7,851,887	123·00	96·21	1·38	269,049

\* Exclusive of coal, etc., on which shunting charges only were collected.

† "Ton-mileage" is the product of the load in tons and the distance in miles over which the load is carried.

Information relating to passenger mileage from 1913 onwards is contained in the following table :—

Year ended 30th June.	Passenger Train Mileage. (000 omitted.)	Passenger Journeys. (000 omitted.)	Total Passenger Miles. (000 omitted.)	Amount received from Passengers.	Average Number of Passengers carried per Train.	Average Mileage per Passenger Journey.	Average Receipt per Passenger Mile.	Average Fare per Passenger Journey.	Density of Traffic per Average Mile Worked.
				£			d.	d.	
1913	9,667	79,490	1,192,584	2,571,446	123	15·00	0·54	7·76	308,002
1914	10,081	86,328	1,235,025	2,832,450	123	14·37	0·55	7·87	312,804
1915	10,099	88,774	1,230,901	2,910,684	122	13·87	0·57	7·87	303,402
1916	10,283	92,851	1,321,491	3,147,041	129	12·85	0·57	8·13	316,980
1917	10,435	96,710	1,473,707	3,202,167	141	15·24	0·52	7·95	341,690
1918	9,441	94,305	1,384,766	3,473,340	147	14·67	0·60	8·84	394,277
1919	9,689	98,569	1,367,691	3,533,869	141	13·88	0·62	8·60	288,725
1920	11,136	114,655	1,632,627	5,137,247	147	14·24	0·76	10·75	328,761
1921	10,751	120,735	1,620,857	5,736,256	151	13·42	0·85	11·40	322,944
1922	10,820	121,299	1,610,619	5,934,616	149	13·28	0·88	11·74	317,238

## WORKING EXPENSES AND EARNINGS.

While the primary object of State railway construction has been to promote settlement, apart from consideration of the profitable working of the lines, the principle has nevertheless been kept in view that the railways should be self-supporting.

A statement of the working expenses and earnings of the railways during the year ended 30th June, 1922, is shown below :—

Working Expenses.		Earnings.	
	£		£
Maintenance of Way and Works	1,940,794	Passengers ... ..	5,934,616
Rolling Stock—		Mails, Parcels, Horses, &c. ...	701,913
Loco Power ... ..	2,696,538	Total Coaching... ..	6,636,529
General Superintendence ...	132,185	Refreshment Rooms ... ..	447,899
Maintenance of Rolling Stock	2,575,186	Goods—	
Examination and Lubrication of Vehicles ... ..	70,576	Merchandise ... ..	4,832,936
Transportation and Traffic ...	2,993,601	Live Stock ... ..	1,192,014
General Charges ... ..	320,575	Wool ... ..	528,945
Refreshment Rooms ... ..	384,648	Minerals ... ..	1,400,015
Gratuities, &c. ... ..	199	Total Goods ... ..	7,953,910
Fire Insurance Fund ... ..	2,000	Rents ... ..	106,706
	11,116,302	Miscellaneous ... ..	67,975
Balance, Net Earnings ... ..	4,096,717		
Total ... ..	£15,213,019	Total ... ..	£15,213,019

The expenditure on locomotive power amounted to 24 per cent. of the total; maintenance of rolling stock to 23 per cent.; transportation and traffic to 27 per cent.; and maintenance of way and works to 17 per cent. Of the earnings, 39 per cent. was derived from the carriage of passengers, 5 per cent. from mails, parcels, &c., 3 per cent. from refreshment rooms, and 52 per cent. from the conveyance of goods.

As the carriage of goods and live stock constitutes the principal source of railway revenue, the earnings fluctuate in each year in accordance with the seasons experienced in the agricultural and pastoral districts. In unfavourable seasons the carriage of fodder and the transfer of live stock at reduced rates cause a diminution in the earnings, and at the same time an increase in the working expenses. The extension of the lines into sparsely settled districts also causes an increase in the proportion of working expenses to total earnings, as several of these lines earn little more than cost of maintenance.

The following table shows the gross earnings, working expenses, and the proportion of the expenditure to receipts, in stated years from 1890 up to 30th June, 1922 :—

Year ended 30th June.	Gross Earnings.	Working Expenses.	Proportion of working expenses to gross earnings.	Year ended 30th June.	Gross Earnings.	Working Expenses.	Proportion of working expenses to gross earnings.
	£	£	per cent.		£	£	per cent.
1890	2,633,086	1,665,835	63·3	1915	7,616,511	5,311,162	69·7
1895	2,878,204	1,642,589	57·1	1920	13,083,847	9,570,984	73·2
1900	3,163,572	1,844,520	58·3	1921	14,267,205	11,032,678	77·3
1905	3,684,016	2,216,442	60·2	1922	15,213,019	11,116,302	73·1
1910	5,485,715	3,276,409	59·7				

The working expenses during the year ended 30th June, 1922, represented 73·1 per cent. of the gross earnings. In 1907 the proportion was 53·0 per cent., the lowest since the control of the railways was vested in Commissioners, but the percentage has risen steadily since that year, the increase from 1920 being due mainly to advances in the salaries and wages of the staff, in the prices of coal and other necessary materials, additional payments for rates on railway properties under the Local Government Act, 1919, and to other items.

The following table shows the gross earnings, working expenses, and net earnings per train mile and per average mile open at five yearly intervals from 1900 onwards :—

Year ended 30th June.	Per train mile.			Per average mile open.		
	Gross Earnings.	Working Expenses.	Net Earnings.	Gross Earnings.	Working Expenses.	Net Earnings.
	d.	d.	d.	£	£	£
1900	85·36	49·77	35·59	1,139	664	475
1905	84·46	50·82	33·64	1,123	676	447
1910	85·12	50·84	34·28	1,513	904	609
1915	89·52	62·42	27·10	1,877	1,309	568
1920	137·51	100·59	36·92	2,635	1,927	708
1921	150·23	116·17	34·06	2,843	2,198	645
1922	166·82	121·89	44·93	2,996	2,189	807

## NON-PAYING LINES.

As many of the railways of New South Wales have been constructed with the view of promoting settlement and developing the natural resources of the State rather than of meeting requirements already existing, it is not surprising that traffic over a number of lines is conducted at a loss. Most of the unprofitable lines are branch lines of comparatively recent construction, but even on portions of the main lines also the earnings do not cover working expenses and interest on the capital cost.

Of the main lines only the southern line returns a profit over its whole length; the western line from Nyngan to Bourke, the northern line from Tamworth to Wallangarra, the North Coast lines, and the South Coast line from Kiama to Nowra are all worked at a loss.

Particulars relating to non-paying lines, under which category are included only lines which have not yet returned a profit, are shown below for the year ended 31st December, 1921 :—

Line.	Length.		Capital Cost.	Interest.	Working Expenses.	Earnings.	Loss after providing for working expenses and interest.
	m.	c.	£	£	£	£	£
Northern—							
Main Line—Tamworth to Wallangarra .....	209	7½	3,066,950	146,010	364,485	426,471	84,024
Branch lines .....	385	6¾	1,916,074	91,219	122,397	128,943	84,673
Total Northern .....	595	54½	4,983,024	237,229	486,882	555,414	168,697
North Coast .....	431	17	5,528,051	263,180	319,641	442,322	140,499
Southern—Branch lines .....	1,108	31	8,464,119	395,793	617,541	568,468	444,866
South Coast—Kiama to Nowra .....	22	59½	411,682	19,599	29,942	22,730	26,811
Western—							
Main Line—Nyngan to Bourke ..	126	4¾	719,048	34,232	43,994	50,103	28,033
Branch lines .....	785	67	4,650,973	221,850	293,591	337,845	177,695
Total Western .....	912	30¼	5,370,021	256,081	337,495	387,948	205,638
Suburban—Branch Lines .....	6	35	115,528	5,500	19,210	8,771	15,939
Total specified lines .....	3,076	67¼	24,872,425	1,177,392	1,810,711	1,985,653	1,002,450

The non-paying lines, which represent approximately 60 per cent. of the total mileage, were responsible for a loss of more than £1,002,000 in 1921, and as the total deficit on railway operations was approximately £577,000, it follows that the paying lines, which constitute only 40 per cent. of the whole, returned a profit of about £425,000. This is shown in the following interesting summary, which has been compiled from the above figures and from the reports of the Railway Commissioners. The particulars relate to the operations during the year 1921.

	Interest on Cost.	Working Expenses.	Earnings.	Deficiency (—) Surplus (+)
	£	£	£	£
Non-paying lines ... ..	1,177,392	1,810,711	1,985,653	(—) 1,002,450
Paying lines ... ..	2,837,328	9,737,639	13,060,133	(+) 425,166
Total ... ..	4,014,720	11,548,350	14,985,786	(—) 577,284

## NET EARNINGS AND INTEREST ON CAPITAL.

The net revenue from railways for the year ended 30th June, 1922, was £4,096,717, while the capital expended on lines open for traffic to that date was £85,552,871, including £659,930 paid from consolidated revenue. The amount thus available to meet the interest charges on the capital expended represents a return of 4·88 per cent. The following table shows the net earnings and the interest returned on the total capital expended on railways, including the cost of construction and equipment for the year 1890 and subsequent periods:—

Year ended 30th June.	Net Earnings.	Interest returned on Capital invested.	Year ended 30th June.	Net Earnings.	Interest re- turned on Cap- ital invested.
	£	per cent.		£	per cent.
1890	967,251	3·17	1915	2,305,349	3·60
1895	1,235,615	3·31	1920	3,512,863	4·48
1900	1,319,052	3·43	1921	3,234,527	4·01
1905	1,467,574	3·40	1922	4,096,717	4·88
1910	2,209,306	4·58			

The next table shows the rate of interest returned on the capital expenditure for each of the years since 1913, with the amount by which such return falls short of or exceeds the actual rate of interest payable on the cost of construction. The rate of return on capital represents the interest on the gross cost of the lines:—

Year ended 30th June.	Interest returned on Capital.	Actual rate of Interest payable on Public Debt.	Gain (+) or Loss (—).	Year ended 30th June.	Interest returned on Capital.	Actual rate of Interest payable on Public Debt.	Gain (+) or Loss (—).
	per cent.	per cent.	per cent.		per cent.	per cent.	per cent.
1913	3·76	3·49	+ 0·27	1918	4·10	4·17	— 0·07
1914	3·87	3·67	+ 0·20	1919	4·03	4·10	— 0·07
1915	3·60	3·67	— 0·07	1920	4·48	4·30	+ 0·18
1916	3·45	3·78	— 0·33	1921	4·01	4·42	— 0·41
1917	·50	4·09	— 0·59	1922	4·88	4·60	+ 0·28

The railways being owned by the State, public opinion at once demands a reduction in freights and fares when the net earnings are much in excess of the interest requirements; substantial reductions were made in 1911 and 1912, but passenger fares and goods rates have been increased considerably since June, 1913.

## EXPANSION OF TRAFFIC.

The expansion which has taken place in the volume of traffic on the railways of New South Wales will be seen from the following comparison. The earnings during the quinquennium 1918–22, show an increase of £22,983,224, or 60 per cent., as compared with the previous five years; the



number of passengers increased by 24 per cent.; and the tonnage of goods and live stock, &c., by 11 per cent. :—

		Five years ended 30th June, 1917.	Five years ended 30th June, 1922.	Increase.	Percentage increase.
<b>Earnings—</b>					
Coaching Traffic ...	£	16,703,755	26,645,808	9,942,053	59
Goods and Live Stock...	£	18,924,196	29,801,661	10,877,465	57
Coal, Coke, and Shale...	£	2,865,949	5,029,655	2,163,706	75
Total earnings ...	£	38,493,900	61,477,124	22,983,224	60
Passengers... ..	No.	444,153,568	549,561,945	105,408,377	24
Goods and Live Stock ...	Tons	26,500,253	32,609,497	6,109,244	23
Coal, Coke, and Shale ...	Tons	33,981,084	34,787,045	805,961	2
Total Tonnage...	...	60,481,337	67,396,542	6,915,205	11

#### FARES AND FREIGHT CHARGES.

Passenger traffic is greatest within the Sydney and Newcastle suburban areas, and the rates of fares within a 34 miles radius of either of these cities are lower than those for equal distances outside those areas. The following table shows the fares charged for ordinary single journeys in 1911, 1916, and 1922, over stated distances from either Sydney or Newcastle. Cheaper fares are available for journeys to tourist districts and holiday resorts.

#### *Single Tickets.*

Distance.	30th June, 1911.		30th June, 1916.		30th June, 1922.	
	First Class.	Second Class.	First Class.	Second Class.	First Class.	Second Class.
Miles.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	0 0 2	0 0 1	0 0 2	0 0 1	0 0 3½	0 0 2
5	0 0 5	0 0 4	0 0 5	0 0 4	0 0 8	0 0 6
10	0 0 9	0 0 6	0 0 9	0 0 6	0 1 3	0 0 10½
20	0 1 6	0 0 11	0 1 6	0 0 11	0 2 5	0 1 6
30	0 2 2	0 1 5	0 2 2	0 1 5	0 3 7	0 2 4
34	0 2 6	0 1 7	0 2 6	0 1 7	0 4 1	0 2 7½
50	0 4 6	0 2 11	0 4 7	0 3 0	0 7 7	0 5 0
100	0 10 9	0 7 1	0 11 2	0 7 4	0 18 7	0 12 2
200	1 3 3	0 14 9	1 4 3	0 15 5	2 0 7	1 5 7
300	1 15 9	1 2 1	1 17 5	1 3 1	3 2 2	1 18 3
400	2 8 3	1 8 8	2 10 6	1 10 0	4 3 7	2 9 10
500	2 18 0	1 13 4	3 0 9	1 15 1	5 0 8	2 17 10

Since 1916 the fares for single journeys, either first or second class, have been increased generally by approximately 66 per cent., although in some cases the increases have amounted to 75 and 90 per cent.

The cost of periodical tickets at the dates mentioned for journeys over the same distances were as follow :—

*Periodical Tickets.*

Distance.	30th June, 1911.				30th June, 1916.				30th June, 1922.			
	Work-men's Weekly.	Monthly.		Work-men's Weekly.	Monthly.		Work-men's Weekly.	Monthly.		Work-men's Weekly.	Monthly.	
		First Class.	Second Class.		First Class.	Second Class.		First Class.	Second Class.		First Class.	Second Class.
1	s. d.	£ s. d.	£ s. d.	s. d.	£ s. d.	£ s. d.	s. d.	£ s. d.	£ s. d.	s. d.	£ s. d.	£ s. d.
5	0 6	0 7 6	0 5 0	0 9	0 9 0	0 6 0	1 3	0 14 9	0 9 9			
10	1 6	0 16 0	0 10 9	1 9	0 19 3	0 13 0	2 11	1 10 9	1 0 6			
20	3 0	1 10 3	1 0 3	3 4	1 16 3	1 4 3	5 5	2 19 3	1 19 6			
30	3 10	1 14 3	1 2 9	4 2	2 1 0	1 7 3	6 11	3 6 6	2 4 3			
34	4 2	1 15 9	1 3 6	4 6	2 3 0	1 8 3	7 5	3 8 9	2 5 9			
50	...	2 1 0	1 6 3	...	2 9 3	1 11 6	...	3 17 0	2 11 3			
100	...	2 17 9	1 14 6	...	3 9 3	2 1 6	...	5 0 3	3 6 9			
200	...	4 3 0	2 9 0	...	4 19 6	2 18 9	...	6 18 9	4 12 6			
300	...	5 0 6	3 1 6	...	6 0 6	3 13 9	...	8 8 0	5 12 0			
400	...	5 18 0	3 14 0	...	7 1 6	4 8 9	...	9 17 0	6 11 3			
500	...	6 15 6	4 6 6	...	8 2 6	5 3 9	...	11 5 9	7 10 6			

The above rates represent the maximum charges, but liberal concessions are made to school pupils, youths, and women. Periodical tickets for distances within the suburban area cost 60 per cent. more than they did in 1916, but for longer journeys the proportionate increase is less. During last year there were slight reductions in second-class periodical tickets, but charges for first-class tickets over long distances were substantially reduced.

*Freight Charges.*

The system adopted in fixing freights on merchandise and live stock is to charge the lowest scale of freight on commodities of low values and on those which are used to assist production. The charge per ton mile decreases as the distance hauled increases.

The following table gives the charges per ton for haulage of the different classes of freight over distances of 100 and 500 miles in 1911, 1916, and 1922 :—

Class of Freight.	30th June, 1911.		30th June, 1916.		30th June, 1922.	
	100 miles.	500 miles.	100 miles.	500 miles.	100 miles.	500 miles.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Ordinary Goods (per ton)—						
Highest Class Freight...	2 4 11	5 15 9	2 9 5	6 7 4	3 16 8	9 17 6
Lowest " " ...	0 3 7	0 11 11	0 3 7	0 11 11	0 6 9	0 12 4
Agricultural Produce						
(Up journey)...	0 7 6	0 12 0	0 7 6	0 12 0	0 11 6	0 19 0
Butter ...	0 18 10	2 16 4	1 0 9	3 2 0	1 15 5	4 2 4
Beef, Mutton, Veal, &c.						
(frozen) ...	0 9 2	2 5 10	0 9 2	2 5 10	0 18 11	2 3 11
Wool—Greasy ...	1 5 0	3 8 9	1 5 0	3 8 9	2 1 8	5 9 5
" —Scoured ...	1 9 2	3 15 0	1 9 2	3 15 0	2 5 10	5 15 8
Minerals—Crude Ore,						
not exceeding £20 per						
ton in value ...	0 4 2	0 15 8	0 4 2	0 15 8	0 6 5	1 2 6
Live Stock (per truck)—	3 3 4	8 13 9	3 9 8	9 11 2	5 9 9	14 19 9

The highest class freight includes expensive, bulky, or fragile articles, such as boots, drapery, drugs, groceries, furniture, liquors, crockery, glassware, cutlery, ironmongery, confectionery, and carpets; the lowest class includes agricultural produce, crude ores, fertilisers, coal, coke, shale, firewood, limestone, stone, slates, bricks, rabbit-proof netting, timber in logs, and posts and rails.

The freight charges over 100 miles are from 50 to 100 per cent. higher than in 1916, but for 500 miles the increases have not been so great, and for lowest class freights and frozen meats the charges have been reduced.

#### SYDNEY AND SUBURBAN PASSENGER SERVICE.

A portion of the passenger traffic between Sydney and suburbs is conducted by suburban railways and ferry services, but the tramways form the most important means of communication.

The railway suburban traffic is conducted principally on the main trunk line, which runs in a westerly direction from Sydney to Granville, where the main southern and western railway systems separate; the northern system branches off at Strathfield (8 miles from Sydney). The South Coast railway, which has a branch from Sydenham (3 miles) to Bankstown (11 miles), brings passengers from the suburbs situated south of Sydney on the western shore of Botany Bay. The passengers travelling by these lines, however, are served by trams running through the city streets from the Central Station to Circular Quay.

The populous suburbs of the north-western, central, and eastern divisions of the metropolitan area are served entirely by the tramways. On the north shore of Port Jackson there is a railway to connect the ferry service at Milson's Point with Hornsby on the main northern line; with this exception all the passengers from the northern suburbs connect by tramway at various points with the ferry services to the Circular Quay.

On account of the expansion of the commercial interests of New South Wales, and the consequent growth of population in and around Sydney, where the trade of the State is centralised, the tramway system has been extended steadily, but the requirements of suburban traffic are gradually outgrowing the capacity of the main city thoroughfares, which were not originally designed for this class of traffic. Thus the extension of the tramway system, combined with the increase in the mercantile vehicular traffic, has resulted in a state of congestion in some of the city streets that demands remedy. The urgent necessity is now recognised of supplying a more effective method of dealing with the rapidly increasing traffic than is possible under any system of surface tramways.

#### CITY AND SUBURBAN ELECTRIC RAILWAY.

The construction of this railway, which was commenced in 1916, but was suspended upon the cancellation of the Norton Griffiths contract in May, 1917, was resumed on 17th February, 1922. The work which is now being undertaken provides for the construction of the city tracks from the "take off" from the existing suburban lines at Redfern to the proposed station at St. James', Queen's-square, and the construction of "up" and "down" Eastern Suburbs tracks from their junction at St. James' station to the cross-over near Park-street. When completed, six electric tracks will be provided into the city over a stone-faced viaduct and bridges extending

from Eddy-avenue to Campbell-street. Two tracks only will be carried on the eastern side of the city to St. James', which will be a temporary terminal station.

At 30th June, 1922, considerable progress had been made in the construction of the necessary retaining walls and abutments, and the excavations in Hyde Park were well advanced.

#### GRADIENTS OF RAILWAYS.

In many cases the railways of New South Wales pass through mountainous country, and have been constructed with a large proportion of steep gradients, some of the heaviest being situated on the trunk lines.

In the southern system, the line at Roslyn, near Crookwell, reaches an altitude of 3,225 feet above sea level; and at Nimmitabel, on the Goulburn to Bombala railway, the height is 3,503 feet. In the western system, at Newnes Junction, on the Blue Mountains, a height of 3,503 feet is attained; and on the northern line the highest point, 4,473 feet, is reached at Ben Lomond.

Numerous deviations have been made during recent years in order to secure easier grades and curves, with the result that considerable economy in working and expedition in traffic have been effected.

The following statement shows the number of miles on different gradients in June, 1922 :—

Gradients.	Southern System.	Western System.	Northern System.	Total.
1 in	miles.	miles.	miles.	miles.
18 to 30	3½	...	...	3½
31 „ 40	62¾	61¾	33	157½
41 „ 50	73¾	51	85¼	210
51 „ 60	60	75½	59¾	195¼
61 „ 70	54½	59½	38¾	152¾
71 „ 80	170¾	103¼	162½	436½
81 „ 90	43¼	44½	45¼	133
91 „ 100	114	146¼	87¼	347½
101 „ 150	177½	188¾	152¼	518½
151 „ 200	108	93½	87	288½
201 „ 250	55¾	54¼	42	152
251 „ 300	77	85¾	62½	225¼
301 „ level	782	790	683¼	2,255¼
Total ...	1,782¾	1,754	1,538¾	5,075½

The above table is exclusive of the Government line from Broken Hill to Tarrawingee, measuring 39 miles 41 chains, and that at Wollongong of 1 mile 8 chains.

## ROLLING STOCK.

Information regarding the rolling stock of New South Wales Railways on 30th June, 1921 and 1922, appears in the following table :—

Classification.	1921.	1922.	Classification.	1921.	1922.
Locomotives ... ..	1,301	1,321	Merchandise—		
Coaching—			Goods, open ... ..	16,063	16,451
Special & Sleeping cars	96	97	Goods, covered ... ..	945	1,426
First-class ... ..	467	470	Meat trucks ... ..	428	*
Composite ... ..	218	220	Live-stock trucks ... ..	2,889	2,957
Second-class ... ..	961	984	Brake-vans ... ..	605	639
Brake-vans ... ..	138	145	Total ... ..	20,930	21,473
Horse-boxes, carriages, trucks, &c. ... ..	289	278	Departmental Stock—		
Total... ..	2,169	2,194	Loco., coal, ballast, etc., waggons ... ..	1,825	1,846

\* Included in covered waggons—not shown separately.

## SIGNALLING AND SAFETY APPLIANCES.

Great progress has been made in providing safety appliances, and on many of the principal stations the points and signals are interlocked, while at the Central Station, Sydney, an electro-pneumatic system of signalling is in operation. During 1913, track block and automatic signalling—the first in Australia—was installed between Redfern Tunnel Signal-box and Sydenham Junction; this system has been extended to 273 miles 51 chains of double track.

Particulars regarding the various systems employed for the safe working of the lines in 1921 and 1922 are shown below :—

	1921.		1922.	
	Mls.	Chs.	Mls.	Chs.
Single Line.				
By electric tablet ... ..	315	17	312	17
electric train staff ... ..	1,822	43	1,895	5
train staff and ticket with line clear reports ... ..	1,451	38	1,448	25
train staff and ticket without line clear reports.	714	1	714	1
train staff and one engine only ... ..	116	57	116	57
	4,419	76	4,486	25
Double Line.				
By automatic signalling with track block working	251	8	273	51
absolute manual block system ... ..	382	0	369	52
permissive manual block system ... ..	5	12	3	44
telephone ... ..	0	33	0	33
	638	53	647	20

The experimental installation of a locomotive cab signalling system laid down on the Richmond line in 1917 was attended with success, and the system is now being installed on the line between Junee and Albury.

The Westinghouse brake is used on all the rolling stock of the Government railways.

## RAILWAY ACCIDENTS.

The persons meeting with accidents on railway lines may be grouped under three heads—passengers, employees, and trespassers; and the accidents themselves may be classified into those arising from causes beyond the control of the persons injured, and those due to misconduct or want of caution.

The accidents may be further subdivided into those connected with the movement of railway vehicles and those apart from such movement.

Adopting such classifications, the accidents during each of the three years terminated on 30th June, 1922, are shown in the following table :—

Classification.	Accidents connected with the Movement of Railway Vehicles.			Accidents not connected with the Movement of Railway Vehicles.		
	1920.	1921.	1922.	1920.	1921.	1922.
Passengers—						
Causes beyond their own control—						
Killed ... ..	...	5	...	...	...	...
Injured ... ..	20	58	38	7	15	7
Their own misconduct, or want of caution—						
Killed ... ..	10	14	4	...	...	...
Injured ... ..	159	133	134	73	67	102
Total { Killed ... ..	10	19	4	...	...	...
{ Injured ... ..	179	191	172	80	82	109
Servants of the Department—						
Causes beyond their own control—						
Killed ... ..	...	2	1	...	...	2
Injured ... ..	75	39	25	140	248	296
Their own misconduct, or want of caution—						
Killed ... ..	19	13	22	5	6	5
Injured ... ..	400	223	214	4,184	5,246	5,373
Total { Killed ... ..	19	15	23	5	6	7
{ Injured ... ..	475	262	239	4,324	5,494	5,669
Trespassers and others—						
Killed ... ..	41	34	40	5	2	3
Injured ... ..	97	101	56	109	78	115
Grand Total { Killed ... ..	70	68	67	10	8	10
{ Injured ... ..	751	554	467	4,513	5,654	5,893

The above return is compiled in a similar way to that adopted by the Board of Trade in England, and all accidents are reported which occur in the working of the railways; or on railway premises, to persons other than servants of the Department, however slight the injuries may be. In the case of employes of the Department all accidents must be reported which cause the employee to be absent for at least one whole day from his ordinary work.

The accident rates among passengers per million carried during the quinquennium ended 30th June, 1922, were as follow :—

	Killed.	Injured.
Accidents connected with movement of railway vehicles—		
Causes beyond their own control ... ..	...	·31
Their own misconduct or want of caution .. ..	·03	1·10
Accidents not connected with movement of railway vehicles—		
Causes beyond their own control ... ..	...	·06
Their own misconduct or want of caution ... ..	...	·84
Total ... ..	·03	2·31

The amount of compensation paid during the year ended 30th June, 1922, in connection with accidents on railways, was £24,014, of which £10,919 was paid for personal injury and £13,095 in respect of goods.

#### VICTORIAN GOVERNMENT RAILWAYS IN NEW SOUTH WALES.

An agreement has been entered into between the States of New South Wales and Victoria under which the Government of Victoria is authorised and empowered to construct and maintain certain railways and other works in New South Wales.

One of the proposed railways will cross the Murray at or near Golgol, New South Wales, and extend into New South Wales for a distance not exceeding 20 miles: a second line will extend from the north side of the bridge at Gonn Crossing to a point at or near Stony Crossing on the Wakool River: a third will be constructed either from a point on the north side of the bridge crossing the Murray River at Moama or from a point on the Deniliquin-Moama Railway Company's line between Moama and a point one mile north of the Mathoura Railway Station, and extend westerly or north-westerly to Moulamein, thence continuing north-westerly to a point within one and a half miles of the Murrumbidgee River, near Balranald: and a fourth will extend from Euston to a point 30 miles north-easterly therefrom, so as to best serve *en route* the Benace Settlement Area.

The railways will be on the 5 ft 3 in. gauge, but all the works within New South Wales are to be constructed suitably for conversion to the adopted uniform gauge. They will be operated by the Victorian Railway Commissioners, but the fares and rates for the carriage of passengers, goods, and live stock thereon shall not be less than the rates charged for similar mileage on the Victorian Railways; while in the construction and working of the lines the same conditions and rates of wages as prevail in Victoria will be observed.

The agreement has been ratified by the Parliaments of New South Wales and Victoria.

#### RAILWAY GAUGES OF AUSTRALIA.

A classification of all railways, Government and private, in each State, according to gauge as at 30th June, 1922, is given below. The Commonwealth lines have been included with the systems of the States through which they have been constructed:—

State.	Route Mileage at each Gauge.								Total Miles.
	1ft. 5in.	2ft.	2ft. 3in.	2ft. 6in.	3ft.	3ft. 6in.	4ft. 8½in.	5ft. 3in.	
New South Wales...	...	36	...	...	...	80	5,317	45	5,478
Victoria ...	...	13	...	122	15	...	...	4,188	4,338
Queensland...	...	942	...	26	...	6,045	...	...	7,013
South Australia (inc. N. Territory) ...	...	10	4	2	...	1,920	597	1,124	3,657
Western Australia ...	29	29	...	...	...	4,334	454	...	4,846
Tasmania ...	...	50	...	...	...	790	...	...	840
Total ...	29	1,080	4	150	15	13,169	6,368	5,357	26,172

In consequence of the diversity of gauge, interstate railway communication is seriously hampered, and in a journey from Queensland to Western Australia breaks of gauge occur at Wallangarra, where the systems of Queensland and New South Wales meet; at Albury, on the border of New South Wales and Victoria; at Terowie and Port Augusta in South Australia; and at Kalgoorlie, where the Commonwealth and Western Australian lines connect.

The necessity and urgency of a uniform gauge to connect the State capitals were affirmed in May, 1920, at a conference between the Prime Minister of the Commonwealth and the State Premiers, who also agreed upon the allocation of the cost and arranged that a committee of railway experts should report regarding costs, &c. Following upon the presentation of this report, at a further conference held in July, 1920, the question was again discussed, and it was finally decided that in the first place a thorough test should be made at Tocumwal of the third-rail device; secondly, that the question of the gauge to be used, the scheme which would best meet requirements, and the estimated cost, should be investigated by a Royal Commission of two expert engineers from overseas and a chairman selected in Australia by the Prime Minister. The Commissioners recommended the adoption of the 4 ft. 8½ in. gauge, submitted estimates of the cost of converting all lines to this gauge, and made recommendations regarding the order in which the work should be carried out, and the methods by which it should be executed and controlled. Their report was considered by the Prime Minister in conference with the Premiers in November, 1921, when it was resolved that the adoption of a uniform gauge was essential to the development and safety of the Commonwealth; also that the gauge should be 4 ft. 8½ in. The Commonwealth was authorised to prepare and issue to the States a draft agreement to carry into effect the recommendations of the Commissioners, and the agreement is now under consideration by the State Governments.

#### PRIVATE RAILWAY LINES.

In New South Wales the established policy has been to keep the railways under State management and control, and at the present time there are only 158 miles of private lines in operation, with the exception of short lines to connect coal and other mines with the main railways, on some of which provision has been made for the carriage of passengers and goods.

In 1874 Parliament granted permission to a company to construct a line from Deniliquin, in the centre of the Riverina district, to Moama, on the River Murray, where it meets the railway system of Victoria. The line, which was opened in the year 1876, is of 5 ft. 3 in. gauge and 45 miles in length; a considerable proportion of the wool and other produce of the Riverina reaches the Melbourne market by this route. During the year 1888 a line of 3 ft. 6 in. gauge, and 35 miles 54 chains in length, was laid down from Silvertown and Broken Hill to the South Australian border. A short line connects the Government railway at Liverpool with the Warwick Farm Racecourse. The Seaham Coal Company's line connects the West Wallsend and Seaham Collieries with Cockle Creek; the South Maitland system supplies the mining districts of East Greta, Stanford-Merthyr, and Cessnock; the Hexham-Mimmi line runs between the collieries in the townships mentioned; and the line of the Commonwealth Oil Corporation extends from Newnes Junction, on the Western line, to the Wolgan Valley.



The following table shows the operations of all private railway lines open to the public for general traffic during the year 1921.

Name of Private Railway.	Line.		Total Capital Expended.	Reserve Fund.	Debentures Outstanding.	Passengers carried.	Goods carried.	Live Stock carried.	Train Miles run.
	Length.	Gauge.							
	m.	ch.	ft. in.	£	£	£	No.	tons.	No.
Deniliquin and Moama.	45	0 5	3	162,673	22,046	...	18,105	32,247	419,645
Silverton† ...	35	54	3 6	491,777	43,155	...	33,019	*538,345	38,829
Warwick Farm ...	0	66	4 8½	5,700	...	...	44,295	...	676
Seaham Colliery...	6	0 4	8½	16,000	...	...	20,755	9,675	...
South Maitland— East Greta, Stan- ford and Merthyr, and Cessnock ...	19	35	4 8½	546,086	...	...	866,619	136,378	444,671
Hexham-Mimmi ...	6	0 4	8½	£1,000,000	...	...	5,068	480	3,552
Commonwealth Oil Corporation.	33	0 4	8½	194,000	...	475,000	1,936	19,260	21,949
New Red Head ...	12	0 4	8½	102,000	...	...	‡	‡	‡

\* Excludes 688,356 tons local shunting.

† Year ended 30th June, 1922

‡ Not available.

§ Approximate.

The Deniliquin and Moama Company possesses 4 locomotives, 6 passenger carriages and 60 goods carriages and vans. The Silverton Company has 20 locomotives, 665 goods vehicles, and 1 passenger carriage; and additional passenger carriages are hired also from the South Australian Government railways as required. On the Warwick Farm line Government rolling-stock is used. The Seaham Colliery has 2 locomotives, but otherwise Government rolling stock is used. On the East Greta railway there are 23 locomotives, 27 passenger carriages, and 45 goods carriages. The Hexham-Mimmi Company has 1 locomotive and 1 passenger carriage; and the Commonwealth Oil Corporation has 4 locomotives, 2 passenger carriages, 1 motor-car, and 67 goods carriages and vans.

In addition to the private railway lines shown in the previous table, there are several branches, connected principally with coal and other mines, with a total length of 135½ miles, a summary of which is given below:—

District.	Length. m. ch.	Gauge. ft. in.
Connected with Northern Line ...	95 54	4 8½
„ Western „ ...	6 39	4 8½
„ South Coast „ ...	{ 3 40 29 76	{ 3 6 4 8½

#### RAILWAYS OF NEW SOUTH WALES AND OTHER COUNTRIES.

The position of the railways of New South Wales, including Government and all private lines, in relation to other important countries of the world, is shown in the following table for the year 1922 in comparison with 1890, to illustrate the relative progress during the last thirty-two years. The figures for South Australia and Western Australia are inclusive of the Federal Government lines. It is, however, necessary to remember that there are vital circumstances which really invalidate any effective comparison, as, for instance, differences in population and in the assistance received or competition encountered from river or sea carriage. In cases where the figures

for 1922 could not be obtained those for the latest year available have been inserted.

Country.	1890.			1922.		
	Length of Railways.	Per Mile of Line Open.		Length of Railways.	Per Mile of Line Open.	
		Popu- lation.	Area.		Popu- lation.	Area
	miles.	No.	sq. mls.	miles.	No.	sq. mls.
New South Wales ... ..	2,263	496	137	5,478	392	56
Victoria ... ..	2,471	457	36	4,338	354	20
Queensland ... ..	2,142	180	509	7,013	109	96
South Australia ... ..	1,774	183	312	3,458	144	110
Western Australia ... ..	505	96	2,099	4,846	69	201
Tasmania ... ..	399	362	66	840	254	31
New Zealand... ..	1,956	320	53	3,134	401	33
United Kingdom ... ..	19,943	1,986	6	23,725	1,981	5
Russia (Europe and Asia) ...	17,363	5,291	498	59,541	3,007	145
Germany ... ..	24,270	1,931	9	39,600	1,629	5
France... ..	21,899	1,745	9	31,958	1,239	6
Switzerland ... ..	1,869	1,569	8	3,600	1,094	4
Austria... ..	15,267	2,481	16	15,739	1,855	7
Hungary ... ..				13,589	1,555	9
Canada... ..	12,628	402	270	38,604	229	97
United States of America ...	154,276	398	19	266,381	395	11
Argentine Republic ... ..	3,635	825	319	21,880	379	53
Japan ... ..	534	74,171	276	7,147	7,956	21
Italy ... ..	} Not available ...	}	}	11,891	3,090	9
India ... ..				36,333	8,674	50
Union of South Africa ...				10,021	697	47
Mexico... ..				15,840	978	48
Brazil ... ..				17,477	1,745	187

Information relating to the year 1890 is not available for the last five countries mentioned in the table, but the latest figures have been inserted, in order that comparisons for 1922 may be more complete.

#### TRAMWAYS.

With the exception of  $2\frac{3}{4}$  miles privately owned, the tramways of New South Wales are the property of the State Government. The standard gauge of 4 ft.  $8\frac{1}{2}$  in. has been adopted for all lines. The electric system was introduced into Sydney at the close of 1899, and is now used, with few

exceptions, for all tramways in the metropolitan district. Of the  $229\frac{1}{4}$  miles of line open at 30th June, 1922, there were  $158\frac{3}{4}$  miles under the electric system and  $70\frac{1}{2}$  miles worked by steam.

Line.	Length of Line.	Length of Single Track.
Electric—	mls. ch.	mls. ch.
City and Suburban ... ..	115 26	211 24
North Sydney ... ..	22 79	39 74
Ashfield to Mortlake and Cabarita ... ..	8 38	15 9
Rockdale to Brighton-le-Sands ... ..	1 20	1 20
Manly to The Spit and Manly to Narrabeen ... ..	10 58	15 38
	158 61	283 5
Steam—		
Arncliffe to Bexley ... ..	2 50	2 50
Kogarah to Sans Souci ... ..	5 45	6 79
Parramatta to Castle Hill ... ..	6 55	6 55
Sutherland to Cronulla ... ..	7 32	7 32
Newcastle City and Suburban ... ..	34 7	44 37
East to West Maitland ... ..	4 5	4 5
Broken Hill ... ..	10 4	11 35
	70 38	83 53
Total ... ..	229 19	366 58
Sidings, loops, and Cross-overs ... ..	...	56 30

During the year ended 30th June, 1922, the length of tramway opened for traffic was 2 miles 1 chain of double track.

The tramway rolling-stock, on 30th June, 1922, consisted of 26 steam motors, 74 steam cars, 1,361 motor cars, 2 trail cars for electric lines, and 113 service vehicles, making a total of 1,576.

The capital cost of the State tramways to 30th June, 1922, amounted to £9,505,732, or £41,468 per mile open; the cost of construction was £4,946,572, or £21,579 per mile, and the expenditure on rolling-stock, workshops, machinery, &c., amounted to £4,559,160.

#### Working of Tramways.

The following statement shows the working of the various tramways in sections for the year ended 30th June, 1922. Two sections returned a profit during the period, and the total profit on all lines, after allowing for interest on capital, amounted to £127,191.

Line	Cost of Construction and Equip-ment.	Passengers carried.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest on Capital.	Profit + Loss —
Electric—	£	No.	£	£	£	£	£
City and Suburban ... ..	6,858,972	271,384,691	2,938,236	2,314,185	624,051	339,966	+ 284,085
North Sydney ... ..	929,812	26,753,152	282,276	261,618	20,658	43,428	— 22,770
Ashfield to Mortlake and Cabarita ... ..	212,941	6,325,640	61,808	58,972	2,836	10,690	— 7,854
Manly to The Spit and Manly to Narrabeen ... ..	319,622	4,522,957	63,840	60,883	2,957	16,089	— 13,132
Rockdale to Brighton-le-Sands ... ..	21,749	851,495	7,608	5,028	2,580	1,093	+ 1,487
Steam—							
Arncliffe to Bexley ... ..	22,963	647,047	6,198	8,207	— 2,009	1,158	— 3,167
Kogarah to Sans Souci ... ..	30,768	1,333,368	17,376	24,785	— 7,409	1,552	— 8,961
Parramatta to Castle Hill ... ..	40,451	1,103,954	14,358	16,233	— 1,875	2,044	— 3,919
Sutherland to Cronulla ... ..	52,083	1,004,417	19,738	21,536	— 1,798	2,624	— 4,422
Newcastle City and Suburban ... ..	888,729	14,859,610	177,404	208,894	— 31,490	42,253	— 73,743
East to West Maitland ... ..	35,318	716,632	7,817	9,345	— 1,528	1,783	— 3,311
Broken Hill ... ..	92,324	1,235,604	13,476	25,030	— 12,454	4,648	— 17,102
Total, All Lines... ..	9,505,732	330,938,567	3,610,135	3,015,616	594,519	467,328	+127,191

*Revenue and Expenditure.*

In the following table are given details of revenue and expenditure, and capital invested for all State tramways, since 1880. The net earnings of the tramways for the year ended 30th June, 1922, amounted to 6·41 per cent. on cost of construction and equipment, as compared with 4·60 per cent., the actual interest payable, taking into consideration the actual sum obtained by the State for its loans, many of which were floated below par :—

Year. ended 30th June.	Total Length of Lines.	Capital Expended on Lines open for Traffic.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest Returned on Capital.
	Miles.	£	£	£	£	per cent.
1880	4½	60,218	18,980	13,444	5,536	9·19
1890	39½	933,614	268,962	224,073	44,889	4·81
1900	71½	1,924,720	409,724	341,127	68,597	3·50
1910	165½	4,668,797	1,185,568	983,587	201,981	4·33
1915	219½	7,970,293	1,986,060	1,611,286	374,774	4·70
1920	225½	8,768,548	2,881,797	2,486,121	395,676	4·56
1922	22½	9,505,732	3,610,135	3,015,616	594,519	6·41

The increase in the working expenses from 1920 is attributable to the same causes referred to with regard to Railways on page 92.

During the year ended 30th June, 1922, the percentage of working expenses to the total receipts was 83·5, as compared with 84·8 in the previous year; the net earnings amounted to £594,519, which is equal to a net return per average mile open of £2,605, as compared with £2,336 per mile open in the previous year.

*Tram Fares.*

The following table shows the fares charged on the trams for one and more sections at various periods since 1911. The average length of a section is 1 mile 78 chains :—

Sections.	Week Days.			Sundays.		
	June, 1911.	June, 1916.	June, 1922.	June, 1911.	June, 1916.	June, 1922.
	d.	d.	d.	d.	d.	d.
1	1	1	2	1	2	3
2	2	2	3	2	3	4
3	3	3	4	3	4	5
4	4	4	5	4	5	6
5	5	5	6	5	6	7
6	6	6	6	6	6	7

*Comparison of Tramway Traffic.*

The following statement contains a comparison of the passenger traffic and the tram mileage since 1900. With the extension of the tramway system the earnings per tram mile decreased from 2s. 3d. in 1900 to 1s. in 1905, but have since risen to 2s. 5½d.; the working cost per tram mile dropped from 1s. 10d. to 10d. in 1905, but increased steadily to 2s. 0¾d. in 1922.

Year ended 30th June.	Length of line open.	Passengers carried.	Tram mileage.	Earnings per tram mile.	Working cost per tram mile.
	miles.	No.		s. d.	s. d.
1900	71½	66,244,334	4,355,024	2 3	1 10
1905	125½	139,669,459	16,413,762	1 0	0 10
1910	165½	201,151,021	20,579,386	1 1¾	0 11½
1915	219½	289,282,845	26,842,974	1 5¾	1 2½
1920	225½	324,884,651	26,889,077	2 1¾	1 10½
1922	229½	330,938,567	29,318,532	2 5½	2 0¾

The extension of the City and North Sydney tramways since 1905 may be seen in the following statement, also the enormous increase in the passenger traffic. All lines which communicate directly with the city of Sydney are included in the category "City and Suburban"; the Ashfield, Kogarah, Arncliffe, and Rockdale lines, which act as feeders to the railways, and the Manly lines have not been included :—

Year ended 30th June.	City and Suburban.			North Sydney.		
	Length of line.	Passengers carried.	Tram mileage.	Length of line.	Passengers carried.	Tram mileage.
	miles.	No.	miles.	miles.	No.	miles.
1905	73½	120,973,934	14,413,273	11½	9,128,575	1,074,743
1910	94½	173,897,034	17,743,868	16½	13,677,491	1,651,153
1915	110½	240,545,317	22,242,010	19½	20,743,680	2,375,916
1920	113	269,255,935	21,811,695	22	25,165,376	2,705,620
1922	115½	271,384,691	23,784,739	23	26,753,152	2,978,619

## TRAMWAY ACCIDENTS.

The accidents which occurred on tramways during each of the three years ended 30th June, 1922, are classified in the following table, in a similar way to those relating to the railways :—

Classification.	Accidents connected with the movement of tramway vehicles.			Accidents not connected with the movement of tramway vehicles.		
	1920.	1921.	1922.	1920.	1921.	1922.
Passengers—						
Causes beyond their own control—						
Killed	...	1	...	...	...	...
Injured	157	276	131	...	1	...
Their own misconduct, or want of caution—						
Killed	12	7	9	...	...	1
Injured	294	345	309	7	11	19
Total { Killed	12	8	9	...	...	1
{ Injured	451	621	440	7	12	19
Servants of the Department—						
Causes beyond their own control—						
Killed	...	1	...	...	...	...
Injured	70	37	38	79	162	142
Their own misconduct, or want of caution—						
Killed	4	2	2	...	...	1
Injured	246	206	199	603	651	766
Total { Killed	4	3	2	...	...	1
{ Injured	316	243	237	682	813	908
Others—						
Killed	19	20	21	...	...	...
Injured	243	276	280	2	3	1
Grand total { Killed	35	31	32	...	...	2
{ Injured	1,010	1,140	957	691	828	928

The number of passengers carried on the tramways during the year ended 30th June, 1922, was 330,938,567, and the rate of fatal accidents among passengers was only .03 per million. With one exception, the fatal accidents in the last five years were ascribed entirely to misconduct or want of caution on the part of passengers, and as the tramways usually traverse crowded streets, the number of accidents must be considered small.

The amount of compensation paid during the twelve months ended 30th June, 1922, in respect of accidents on the tramways was £22,571, as compared with £32,239 for the preceding year.

#### PRIVATE TRAMWAYS.

There is only one tramway under private control within the State, viz., a steam line, which passes through the town of Parramatta, commencing at the Park and continuing as far as the Newington Wharf at Duck River, a distance of 2 miles 66 chains, where it connects with the Parramatta River steamers conveying passengers and goods to and from Sydney. The line has been constructed to the standard gauge of 4 feet 8½ inches, and was opened in 1883.

#### RAILWAYS AND TRAMWAYS.

A statement of the capital cost of the State Railways and Tramways, and the result of working during the last two years, is shown below :—

Particulars.	1921.			1922.		
	Railways.	Tramways.	Total.	Railways.	Tramways.	Total.
Cost of Construction and Equipment at 30th June ..	£ 82,304,194	£ 9,060,757	£ 91,364,951	£ 85,552,871	£ 9,505,732	£ 95,058,603
Year ended 30th June—						
Earnings .. ..	14,267,205	3,471,738	17,738,943	15,213,019	3,610,135	18,823,154
Working Expenses .. ..	11,032,677	2,943,252	13,975,929	11,116,302	3,015,616	14,131,918
Balance after paying Working Expenses .. ..	3,234,528	528,486	3,763,014	4,096,717	594,519	4,691,236
Interest on Capital .. ..	3,811,560	421,814	4,233,374	4,217,881	467,328	4,685,209
Deficit .. ..	577,032	*106,672	470,360	121,164	*127,191	*6,027

\* Surplus.

#### EMPLOYMENT AND WAGES.

The amount of wages paid, together with the staff employed on the Government railways and tramways in June, 1922, is shown in the following statement, in comparison with the previous year :—

Particulars.	Year ended 30th June, 1921.			Year ended 30th June, 1922.		
	Railways.	Tramways.	Total.	Railways.	Tramways.	Total.
Persons employed—						
Salaried staff .. ..	5,088	785	5,873	5,125	792	5,917
Wages „ .. ..	32,470	8,233	40,703	31,707	8,942	40,649
Total number .. ..	37,558	9,018	46,576	36,832	9,734	46,566
	£	£	£	£	£	£
Salaries and wages paid .. ..	9,153,089	2,278,998	11,432,087	9,337,305	2,384,457	11,721,762

The average number of men employed during the year ended 30th June, 1922, was 46,347. The number of railway and tramway employees who joined the Australian Imperial Force was 8,477, and permanent employees were paid the difference in their pay in the railway and tramway service and in the defence forces, similar terms being allowed to members of the temporary staff under certain conditions.

A scheme to provide superannuation allowances for the officers of the railway and tramway service was introduced in 1910, particulars of which are shown in the part of this Year Book dealing with Social Condition.

## COMMERCE.

POWER to make laws with respect to trade and commerce with other countries and between the States vests in the Commonwealth Parliament, and in the year 1901 control of the Customs and Excise Department was transferred to the Commonwealth. Until the year 1910, particulars relating to Interstate trade were recorded by the Federal Government, but it was decided to discontinue the records as from 13th September, 1910, therefore the figures in this chapter relate only to oversea trade—that is, to the trade of New South Wales with countries beyond Australia.

The first Commonwealth Act relating to Customs came into operation by proclamation on 4th October, 1901; it provided administrative machinery in relation to Customs, and prescribed the manner in which duties were to be computed and paid. Prior to the establishment of the Commonwealth a different tariff was in operation in each State, and interstate trade was subject to the same duties as oversea trade. On 8th October, 1901, when the Customs Tariff Act of 1902 was introduced in the Federal Parliament, a uniform tariff for all the States was imposed, trade and commerce between the States became free, and the power of the Commonwealth to impose duties of customs and excise became exclusive, except that the State of Western Australia was given the right to levy duty on interstate imports for a period of five years.

In the administration of matters relating to trade and customs, the Department of Trade and Customs, under the direction of a Minister of the Crown, is assisted by the Commonwealth Board of Trade and the Tariff Board. The functions of the former, as now constituted, include the collection and dissemination of commercial and industrial intelligence, the control of Trade Commissioners abroad, and the investigation of matters affecting trade, commerce, and industry. The Board, under the presidency of the Prime Minister, includes in its membership representatives of the Customs Department, the Chambers of Commerce, the Chamber of Manufactures, and of other kindred organisations. The Minister for Trade and Customs is vice-president. Meetings are held alternately in Sydney and Melbourne. The Tariff Board consists of three members including an administrative officer of the Department of Trade and Customs, who acts as Chairman. The Minister refers to the Board for investigation such matters as the classification of goods; the determination of the value of goods for duty; the necessity for new or increased or reduced duties, or for bounties; proposals for applying preferential tariffs to any country; and complaints that a manufacturer is taking undue advantage of the protection afforded by the tariff to charge unnecessarily high prices. The Minister may request the Board to report as to the effect of the customs and excise tariffs and of the customs laws on the industries of the Commonwealth, and other matters affecting the encouragement of industry in relation to the tariff.

Regulations under the Commerce (Trades Descriptions) Act, 1905, prohibit the importation and exportation of the following classes of goods if they do not bear a prescribed trade description, viz., articles used for food or drink by man, or used in the manufacture or preparation thereof; medicines; manures; apparel (including boots and shoes) and the material from which it is manufactured; jewellery; seeds and plants.

Customs officers are authorised to inspect imports and exports, and exporters may be required to give notice of intention to export. Special care

is exercised in regard to the supervision and inspection of meat, and standard requirements are prescribed for abattoirs and premises where it is prepared for shipment. Goods approved for export are marked with an official stamp, butter and cheese are graded, and frozen meat, rabbits, etc., are classified.

#### OVERSEA TRADE.

The value of the goods imported and exported as shown in the following tables represents the official value as recorded by the Department of Trade and Customs. The value of goods exported is the value in the principal markets of New South Wales. The value of goods imported represents the amount on which duty is payable or would be payable if the duty were *ad valorem*. In accordance with the provisions of the Customs Act of 1901 the value of goods subject to *ad valorem* duty is taken to be the fair market value in the principal markets of the country whence exported, f.o.b. at the port of export, plus 10 per cent. to cover the cost of packing, insurance, freight, and all other charges. The percentage addition to cover these charges has not been varied, though it is probable that in many instances increases in respect of insurance and freight since 1914 have been greater proportionately than the rise in the value of the goods imported.

Another matter which has an important bearing upon the statistics of the value of imports is the basis of the computation of the value of goods imported from foreign countries. The Customs Act of 1901 provides that where an invoice shows the value of goods in any currency other than British, the equivalent value in British currency is to be ascertained "according to a fair rate of exchange." Until December, 1920, it was the practice of the Customs authorities to assess the value as in the country of export at the time of shipment, and to convert foreign values on the basis of the mint par rate of exchange, *i.e.*, the standard value of the coin of the exporting country as compared with the pound sterling in gold coin.

During the war period the abnormal conditions caused considerable variations from the standard rates, and in many countries restrictions were placed on the export of gold. With prices rising rapidly, the basis of valuation for duty became a matter of contention between the Customs authorities and the importers, as the existing practice caused to be overrated the goods from countries with a depreciated exchange, with the contrary effect where the pound sterling was at a discount. In 1920 an important amendment was made in the Customs Act to provide that where the bank rate of exchange of any country became more than 10 per cent. above or below mint par rate the Minister for Trade and Customs, on the recommendation of the Commonwealth Board of Trade, might direct that the value of goods imported from that country be computed according to the bank rate of exchange. In November of that year the Board made the necessary recommendations in respect of goods from France, Italy, Belgium, and Czecho-Slovakia. In the following month the amending Act was rendered nugatory by a decision of the High Court of Australia in a case relating to the assessment of the value for duty of imported goods; the Court held that "rate of exchange" in the Customs Act meant the rate at which drafts drawn in a foreign country could be purchased for sterling at the relevant date. In consequence of the decision, the method of converting foreign currencies was changed, and since 8th December, 1920, the values for statistical purposes, as well as for duty, have been based on the commercial rates of exchange at the date of exportation.

The section of the Customs Act relating to the valuation of imports was amended in October, 1922, upon the recommendation of the Tariff Board,



to provide that the value for duty shall be the sum of the following:—(a) the actual price paid by the Australian importer plus any discount or other special deductions, or the current domestic value in the country of export at the date of exportation, whichever is the higher; (b) all charges for placing the goods free on board at the port of export; and (c) 10 per cent. of the amounts (a) and (b). In the case of goods consigned for sale in Australia the value is the amount which would be the value if the goods were sold at the date of exportation to an Australian importer.

The total value of overseas imports and exports, as recorded by the Customs Department, during each year since 1912, is shown in the following table, with the value per head of population:—

Year ended 30th June.	Imports.	Exports.	Per head of Population.		
			Imports.	Exports.	Total Oversea Trade.
	£	£	£ s. d.	£ s. d.	£ s. d.
1912*	32,303,630	32,958,529	18 10 6	18 17 11	37 8 5
1913*	32,350,663	32,839,789	17 15 6	18 0 10	35 16 4
1914†	16,677,336	15,738,313	9 0 7	8 10 5	17 11 0
1915	27,323,243	28,107,025	14 10 1	14 18 4	29 8 5
1916	33,379,698	40,975,416	17 12 6	21 12 7	39 5 1
1917	32,742,297	50,290,824	17 5 9	26 11 1	43 16 10
1918	29,519,936	33,619,093	15 7 0	20 11 11	35 18 11
1919	46,013,102	51,027,359	23 8 0	25 19 0	49 7 0
1920	44,690,599	55,017,065	21 18 7	26 19 11	48 18 6
1921	72,466,388	52,601,806	34 13 7	25 3 5	59 17 0
1922	43,321,478	48,012,855	20 7 3	22 11 4	42 18 7

\* Year ended 31st December.

† Half-year ended 30th June.

The value of imports fluctuated considerably during the period under review; it dropped during the first year of the war, but regained its former level in 1916; subsequently shortage of shipping caused it to decline again until 1918-19, when there was a marked increase, and during the last four years the value of imports has been much greater than in pre-war years. Reference to a table of index numbers in Part "Food and Prices" of this Year Book indicates that the increase in the aggregate value of imports, as shown above, reflects enhanced prices rather than larger quantities.

The abnormally high value of imports during 1920-21 was due to extraordinary conditions affecting Australian trade. During the preceding years there had been considerable delay in the delivery in Australia of goods from abroad, and in many cases a curtailment of the quantities ordered. Anticipating the continuance of these conditions Australian importers placed large orders during the period of trade expansion which immediately followed the cessation of hostilities. Then a period of depression commenced in overseas countries, causing a diminution in demand and the cancellation of contracts, so that the Australian orders were delivered promptly and in full

quantity, with the result that the value of imports expanded rapidly. The prompt delivery caused difficulty in financing drafts for payment abroad, and the local banks took action to restrict the issue of fresh credit, so that in the following year the value of imports dropped again.

The value of the exports rose fairly constantly after the year 1914, when domestic production was low owing to a bad season. The figures for subsequent years do not reflect the seasonal conditions, as in normal times, because the most important items of export, *e.g.*, wool, meat, wheat, etc., were purchased by the Imperial Government and stored in large quantities in Australia pending shipment, which under war conditions was effected gradually, and restrictions were placed upon the export of some commodities, owing to shortage of shipping and to other reasons. The value of exports reached a maximum in 1919-20, and has since declined, the decrease being due in a large measure to lower prices.

A comparison of the values of imports with those of exports shows that in each year of the period under review, except 1919-20, there was an excess of exports. The value of exports, as shown above, does not include the value of exports in the form of ships' stores, which amounts to a considerable sum, as is shown on a later page.

The figures relating to imports and exports include bullion and specie. Gold is an important item of domestic produce in Australia, though New South Wales does not contribute so largely to the production as Western Australia, Queensland, and Victoria. During the period under review, large consignments of specie and bullion, classed as Australian produce, were consigned from New South Wales to countries having direct communication with Sydney, and the transactions are to be regarded as affecting the trade of the whole Commonwealth rather than of New South Wales.

Year ended 30th June.	Imports of Bullion and Specie.	Exports of Bullion and Specie.		
		Australian Produce.	Other Produce.	Total.
	£	£	£	£
1913*	1,117,577	1,175,908	533,093	1,709,001
1915	450,216	1,240,749	378,335	1,619,084
1916	517,453	9,126,436	535,043	9,661,479
1917	252,686	11,249,497	258,886	11,508,383
1918	1,234,539	3,243,057	173,403	3,416,460
1919	2,538,514	3,426,312	82,146	3,508,458
1920	65,129	1,914,392	76,125	1,990,517
1921	29,392	3,770,195	15,275	3,785,470
1922	68,369	2,027,004	1,550	2,028,554

\* Year ended 31st December.

In the year ended June, 1916, the value of bullion and specie included in the exports of New South Wales rose by eight millions sterling, owing to the large consignments of gold to the United States; in the following year gold was sent to Canada and to the United States, and the value of the imports increased further by nearly two millions. In 1917-18 India received gold to the value of £2,189,000; in 1918-19 there was a contrary movement, and the importation from India of bullion to the value of £1,500,000 was recorded.

## IMPORTS.

Statistics of the imports classified according to the country of shipment do not give a true indication of their origin as a large proportion of the goods are transhipped through other countries. The following statement of imports shows the countries of origin as well as the countries of shipment :—

Country.	Imports according to Country of Shipment.		Imports according to Country of Origin.	
	1913.	1921-22.	1913.	1921-22.
	£	£	£	£
United Kingdom ... ..	18,107,138	22,151,436	15,367,428	19,969,726
Canada ... ..	675,592	1,296,393	359,022	1,183,943
South Africa ... ..	53,350	80,942	196,206	161,042
India and the East ... ..	1,935,629	2,817,275	1,705,526	2,061,813
New Zealand ... ..	1,632,184	1,111,739	1,457,237	447,044
South Sea Islands ... ..	509,885	1,478,131	481,439	1,436,660
Other British Possessions ... ..	6,401	67,325	82,796	201,887
Total, British ... ..	£ 22,911,179	29,003,241	19,652,756	25,462,115
Belgium ... ..	1,078,518	476,968	456,503	339,853
France ... ..	310,050	167,275	894,186	1,138,509
Germany ... ..	1,880,042	13,127	2,834,038	15,242
Italy ... ..	198,876	273,367	243,134	374,085
Sweden ... ..	279,059	586,767	344,833	581,273
Other European ... ..	354,028	533,317	1,149,715	2,228,869
United States and Hawaii ... ..	4,252,309	8,953,690	5,331,032	9,693,899
Japan ... ..	464,057	1,880,714	467,666	1,866,284
China and the East ... ..	384,980	1,293,133	632,249	1,379,746
South Sea Islands ... ..	178,835	108,739	184,048	104,501
Other Foreign ... ..	58,730	31,095	160,523	137,162
Total, Foreign ... ..	£ 9,439,484	14,318,237	12,697,927	17,859,363
Total, all Countries ... ..	£ 32,350,663	43,321,478	32,350,663	43,321,478

The value of direct imports from the United Kingdom greatly exceeds the value received from any other country; in 1921-22 it was higher by £4,000,000 than in the year before the war, but a larger increase occurred in the value of direct imports from the United States (including Alaska and Hawaii) which rose from £4,252,309 to £8,953,690. Imports from the East, i.e. India and Ceylon, China, Japan, Straits Settlements, the East Indies and Philippine Islands, increased in value from £2,784,666 to £5,991,122. The value of direct imports from the South Sea Islands, British and foreign, increased by over 100 per cent, chiefly on account of the development of trade with former German possessions. Imports from Germany dwindled to an insignificant proportion, and there was a marked diminution in respect of France and Belgium, though there was an increase in the importations from other European countries, notably Sweden. Trade between New Zealand and the Australian States is liable to fluctuate with seasonal conditions, as in periods of scarcity in either country, grain, fodder, etc., are imported to augment local production.

The figures showing imports according to country of origin show the importance of the United Kingdom as a distributing centre for the products of other countries. The value of the products of the United Kingdom imported into New South Wales was less than the value of the direct imports by £2,739,710 in 1913, and by £2,181,710 in 1921-22; and the importations of the products of all the countries of Continental Europe, except Belgium, and of South Africa and the United States, were larger than is indicated by

the figures relating to the direct trade. It is noticeable that the value of the New Zealand produce imported in 1921-22 represented only 40 per cent. of the value of direct imports as compared with nearly 90 per cent. in 1913; the transshipments in 1921-22 covered a wide range of articles, the largest items being hosiery £80,700, piece goods £23,900, motor vehicles and parts, £40,400. By summarising the figures relating to country of origin, according to geographical position, it is found that the development of the trade since 1913 is due almost entirely to increased trade with North America and the Eastern Countries. The value of European goods received was £24,600,000 in 1921-22 as compared with £21,300,000 in 1913; the value of North American goods increased from £5,700,000 to £10,900,000; Eastern countries from £2,800,000 to £5,300,000; and the value of products of New Zealand and the South Sea Islands imported in 1921-22 was somewhat lower than in the earlier year owing to a decline in respect of New Zealand, the figures being £2,100,000 in 1913, and £2,000,000 in 1921-22. The statistics of the import trade in each year since 1913 are summarised according to the nationality of the exporting country in the following table:—

Year ended 30th June.	Direct Imports.				Imports—Country of Origin.			
	United Kingdom.	British Possessions.	Total British.	Foreign Countries.	United Kingdom.	British Possessions.	Total British.	Foreign Countries.
	£000.	£000.	£000.	£000.	£000.	£000.	£000.	£000.
1913*	18,107	4,804	22,911	9,440	15,368	4,285	19,653	12,698
1915	15,368	4,572	19,940	7,383	13,017	4,014	17,031	10,292
1916	15,608	6,435	22,043	11,337	13,629	5,726	19,355	14,025
1917	15,722	6,286	22,008	10,734	14,250	5,433	19,683	13,059
1918	10,515	6,395	16,910	12,610	9,357	5,532	14,889	14,631
1919	15,223	10,520	25,743	20,270	13,978	9,740	23,718	22,295
1920	17,511	8,811	26,322	18,369	15,591	7,864	23,455	21,236
1921	36,213	9,632	45,845	26,621	32,960	8,280	41,240	31,226
1922	22,151	6,852	29,003	14,318	19,970	5,492	25,462	17,859
PER CENT. OF TOTAL IMPORTS.								
1913*	56.0	14.8	70.8	29.2	47.5	15.2	60.7	39.3
1915	56.0	15.4	71.4	28.6	47.6	14.7	62.3	37.7
1916	46.7	19.3	66.0	34.0	40.8	17.2	58.0	42.0
1917	48.0	19.2	67.2	32.8	43.5	16.6	60.1	39.9
1918	35.6	21.7	57.3	42.7	31.7	18.7	50.4	49.6
1919	33.1	22.9	56.0	44.0	30.4	21.2	51.6	48.4
1920	39.2	19.7	58.9	41.1	34.9	17.6	52.5	47.5
1921	50.0	13.3	63.3	36.7	45.5	11.4	56.9	43.1
1922	51.1	15.9	67.0	33.0	46.1	12.7	58.8	41.2

\* Year ended 31st December.

The proportion of the total imports which were shipped from the United Kingdom declined from 56 per cent. in 1913 to 33 per cent. in 1918-19, then increased rapidly to 50 per cent. in 1920-21, the proportion in the following year being slightly higher. The abnormally high value of imports from the United Kingdom in 1920-21 has been explained earlier. The value of imports received from other British countries has shown remarkable fluctuations since 1919, mainly on account of variations in respect of India; gold to the value of £1,498,000 was received from that country in 1918-19, causing the value of imports to rise far above the normal level. The transfer of former enemy territory to the British group in that year contributed also to the increase. The proportion of the direct trade from foreign countries, which increased during the war period and has since declined, represented 33 per cent. in 1921-22, as compared with 29.2 per cent. in 1913, and

44 per cent. in 1918-19. But the variation in the proportion of foreign goods was not so great as these figures show, as a comparatively smaller proportion of the foreign produce was transhipped through British countries in recent years, and the increase in the foreign trade has been in respect of countries having direct communication with New South Wales.

#### ARTICLES OF IMPORT.

A classification of the goods imported into New South Wales during the years ended June, 1921 and 1922, is shown below in comparison with corresponding figures for the year 1913:—

Classification of Imports.	1913.	1920-21.	1921-22.
	£	£	£
Foodstuffs of Animal origin ... ..	367,881	489,715	634,110
Foodstuffs of Vegetable origin, and Salt ... ..	1,450,580	3,952,953	973,835
Beverages (non-alcoholic) and ingredients ... ..	790,189	1,011,328	1,219,131
Spirits and Alcoholic Liquors ... ..	927,644	950,572	829,223
Tobacco and Preparations thereof ... ..	609,570	2,833,059	1,636,745
Live Animals ... ..	86,131	52,512	72,215
Animal Substances not Foodstuffs ... ..	185,376	831,369	670,463
Vegetable Substances and unmanufactured			
Fibres ... ..	539,288	2,786,443	2,279,293
Apparel ... ..	2,325,935	3,669,014	2,199,301
Textiles ... ..	4,745,852	14,877,948	10,098,454
Manufactured Fibres ... ..	881,466	1,735,916	735,276
Oils, Fats, and Waxes ... ..	800,873	3,256,307	2,047,162
Paints and Varnishes ... ..	243,613	294,054	189,820
Stones and Minerals used Industrially ... ..	102,292	124,733	80,672
Specie ... ..	160,955	10,343	27,124
Metals, unmanufactured, and Ores (including			
Bullion) ... ..	1,091,321	131,109	100,314
Metals, partly manufactured ... ..	578,897	522,835	330,194
Machines and Machinery ... ..	2,218,755	4,435,952	3,283,389
Other Manufactures of Metals ... ..	4,907,880	12,187,099	5,603,128
Rubber and Rubber Manufactures ... ..	278,263	841,397	539,490
Leather and Leather Manufactures ... ..	252,344	374,273	150,842
Wood and Wicker ... ..	1,598,287	2,587,272	1,662,735
Earthenware, China, Glass, etc. ... ..	647,706	1,386,809	855,686
Paper ... ..	891,984	3,127,371	1,451,914
Stationery ... ..	458,079	858,070	675,536
Jewellery, Timepieces, and Fancy Goods ... ..	705,937	1,345,558	886,220
Optical, Surgical, and Scientific Instruments ... ..	495,204	740,260	678,703
Drugs, Chemicals, and Fertilisers ... ..	863,936	2,146,337	1,344,886
Miscellaneous ... ..	3,141,425	4,905,800	2,015,617
<b>Total Imports ... ..</b>	<b>32,350,663</b>	<b>72,466,388</b>	<b>43,321,478</b>

The bulk of the imports consists of manufactured articles. The textile group is the most important in respect of value, and in 1921-22 represented 23 per cent. of the total value of imports; next in order are metal manufactures and machinery, 21 per cent. The value of the textiles imported has increased by over 100 per cent. since 1913, and the chief item, piece goods, has risen from £3,588,877 to £7,950,655. On the other hand, the value of the goods classed as apparel has declined by 9 per cent. Articles of food and drink and tobacco constitute an important class of imports, the value in 1921-22 being about 12 per cent. of the total. The value of spirits and alcoholic liquors, which include spirits for industrial purposes and for pharmaceutical preparations, has decreased since 1913, notwithstanding a considerable rise in the prices. The importation of tobacco has increased; it is imported principally in an unmanufactured state, and is prepared for

consumption in local factories. In the class vegetable substances and unmanufactured fibres, there were some remarkable increases, viz., copra, from £117,873 in 1913 to £1,081,378 in 1921-22; yarns, from £80,008 to £739,002; linseed, from £43,049 to £344,624; kapok, from £61,431 to £135,881. The largest increase in the class, oil, fats, and waxes, was in respect of petroleum oils (in bulk), including benzine and petrol, which amounted to £1,106,563 in 1921-22, as compared with £194,420 in 1913.

In the following table the various classes of imports have been arranged in order of value as in 1921-22, and the chief items in each class are shown:—

Article.	Value of Import.	Article.	Value of Import.
£		£	
<b>Apparel, Textiles and Manufactured Fibres—</b>		<b>Vegetable Substances and Unmanufactured Fibres—</b>	
Piece Goods—Cotton .. ..	3,761,049	Copra .. .. .	1,081,378
Silk and Velvet .. ..	2,007,895	Linseed .. .. .	344,624
Woollen .. .. .	1,257,297		
Lace, etc. .. ..	306,917	<b>Paper and Stationery—</b>	
Other .. .. .	519,479	Printing Paper .. ..	824,186
Bags and Sacks .. ..	637,263	Books .. .. .	409,981
Sewing Silk, Cottons, etc. ..	552,200		
Socks and Stockings .. ..	519,479	<b>Oils, Fats, Waxes—</b>	
Trimmings and Ornaments ..	444,594	Petroleum Spirits .. ..	1,106,563
Floorcloths and Linoleums ..	435,963	Kerosene .. .. .	330,227
Carpets .. .. .	412,782	Mineral (Lubricating) Oil ..	224,141
Canvas and Duck .. ..	330,858		
<b>Machines and Manufactures of Metal—</b>		<b>Wood and Wicker—</b>	
Machines and Machinery, n.e.i. ..	3,515,785	Undressed Timber .. ..	930,150
Metal Manufactures .. ..	1,578,033	New Zealand White Pine ..	237,377
Motor Vehicles and parts .. ..	1,305,911		
Iron and Steel—plate and sheet ..	624,594	<b>Other Classes—</b>	
Dynamo Electric Machines .. ..	432,492	Yarns, Woollen .. .. .	430,385
Tools of Trade .. .. .	230,013	Cable and Wire (Electrical) ..	400,227
Cutlery .. .. .	204,419	Glassware .. .. .	348,761
Tinned Plates and Sheet .. ..	237,906	Fancy Goods .. .. .	315,169
<b>Food, Beverages, and Tobacco—</b>		Cameos and Precious Stones ..	297,502
Whisky .. .. .	669,734	Films for Kinematographs ..	282,207
Fish, in tins .. .. .	395,857	Vessels .. .. .	269,000
Rice .. .. .	185,661	Skins and Hides .. ..	217,145
Sugar .. .. .	160,499	Iron and Steel—Bar, Rod, etc. ..	206,766

The United Kingdom is the main source of supply of nearly all the manufactured articles imported into New South Wales. The principal products of other European countries are as follow:—France and Switzerland, silk piece goods, lace and embroideries, trimmings and ornaments; Belgium, glassware, iron and steel; Netherlands, electrical appliances; Norway, paper; Sweden, paper, cream separators, timber, and wood pulp; Italy, motor vehicles and parts. The items of Eastern origin include the following:—From Japan, piece goods of silk and of cotton, chinaware, fancy goods, timber; from India, bags and sacks, hessian and other jute goods, rice, linseed; from Ceylon, tea; from China, lace and linseed; from Netherlands East Indies, kapok, petroleum oils, tea; and from the Straits Settlements, crude rubber. The products of the United States which are imported in large quantities, include machines and machinery of various kinds, metal manufactures, oils, tobacco, motor vehicles and parts, films for kinematographs, timber, iron and steel, rubber tyres and tubes, and socks and stockings. The principal imports of Canadian origin are printing paper, tinned fish, machinery, timber, and motor vehicles and parts. White pine timber is the principal item of import from New Zealand. Copra is imported from various South Sea Islands, raw sugar from Fiji, rock phosphates from Nauru, and precious stones from South Africa.

#### EXPORTS.

The value of exports from New South Wales to the various oversea countries in the years 1913 and 1921-22 is shown in the following table.

The bulk of the exports classified as Australian produce was produced in New South Wales; the figures under this heading include the produce of other Australian States shipped from New South Wales, and do not include the New South Wales produce transhipped through other States —

Country.	1913.			1921-22.		
	Australian Produce.	Other Produce.	Total.	Australian Produce.	Other Produce.	Total.
	£	£	£	£	£	£
United Kingdom ...	11,665,426	238,998	11,904,424	18,404,779	400,544	18,805,323
Canada ...	144,093	1,782	145,875	252,785	5,354	258,139
South Africa...	327,304	11,903	339,207	212,226	2,535	214,761
India and the East...	1,095,784	317,309	1,413,093	1,822,847	59,456	1,882,303
New Zealand ...	838,705	483,234	1,321,939	1,931,297	825,286	2,756,583
South Sea Islands ...	274,429	237,094	511,523	851,074	614,448	1,465,522
Other British Possessions ...	29,872	75	29,947	447,135	2,090	449,225
Total, British ...	14,375,613	1,290,445	15,666,058	23,922,143	1,909,713	25,831,856
Belgium ...	2,761,299	8,362	2,769,661	1,433,559	20,443	1,454,002
France ...	4,642,086	7,388	4,649,474	4,330,995	115,683	4,446,678
Germany ...	3,639,468	20,208	3,659,676	1,631,739	461,746	2,093,485
Italy ...	509,027	1,406	510,433	3,180,930	50,685	3,231,615
Sweden ...	4,266	559	4,825	10,485	126	10,611
Other European ...	531,755	3,301	535,056	720,529	303,026	1,023,555
United States and Hawaii ...	1,921,535	27,854	1,949,389	4,510,083	191,071	4,701,154
Japan...	1,106,860	7,055	1,113,915	3,579,873	58,261	3,638,134
China and the East...	692,718	18,690	711,408	1,121,318	24,306	1,145,624
South Sea Islands ...	287,572	318,311	605,883	252,693	143,869	401,562
Other Foreign ...	662,970	1,041	664,011	34,560	19	34,579
Total, Foreign ...	16,759,556	414,175	17,173,731	20,806,764	1,374,235	22,180,999
Total, all Countries	31,135,169	1,704,620	32,839,789	44,728,907	3,283,948	48,012,855

During the period under review there was a considerable variation in the direction of the export trade. Exports to Europe in 1921-22 were higher in value by £7,000,000, or 39 per cent., than in 1913; the increase occurred in respect of the trade to the United Kingdom, which increased by nearly 60 per cent. The value of goods sent direct to other European countries was approximately the same in both years, though the distribution amongst the various countries was altered. Thus a remarkable increase, from £510,433 to £3,231,615, occurred in the value of exports to Italy, where an immense quantity of wheat was delivered in 1921-22; exports to the Netherlands rose from £99,300 to £596,800, and to Spain from £49,800 to £204,500. The value of goods shipped to France was somewhat less than in 1913, and a marked decline occurred in regard to exports to Germany and to Belgium.

Between 1913 and 1921-22 the value of exports to North America rose from £2,100,000 to nearly £5,000,000, and exports to Eastern countries from £3,200,000 to nearly £5,000,000. The Island trade expanded from £2,400,000 to £4,600,000, a large proportion of the re-exports being sent to New Zealand and the South Sea Islands. The value of exports to Egypt increased from £48,100 to £431,600, but it was much less in 1921-22 than in the years of the war period, when large supplies of war material, food stuffs, etc., were consigned to Egyptian ports.

The value of the oversea exports from New South Wales to British and foreign countries in 1913, and in each of the last eight years, is shown below :—

Year ended 30th June.	British Empire.			Foreign Countries.	Total Exports.
	United Kingdom.	Other British Countries.	Total.		
	£	£	£	£	£
1913*	11,904,424	3,761,631	15,666,058	17,173,731	32,839,789
1915	16,258,252	4,580,536	20,838,788	7,268,237	28,107,025
1916	15,320,054	5,076,785	20,396,839	20,578,577	40,975,416
1917	23,906,117	12,098,164	33,004,281	14,286,543	50,290,824
1918	17,267,342	10,661,804	27,929,146	11,689,947	39,619,093
1919	23,584,416	13,927,893	37,512,309	13,515,050	51,027,359
1920	26,009,277	10,965,772	36,975,049	18,042,016	55,017,065
1921	20,630,150	11,235,612	31,865,762	20,736,044	52,601,806
1922	18,805,323	7,026,533	25,831,856	22,180,999	48,012,855

## PER CENT. OF TOTAL EXPORTS.

1913*	36·2	11·5	47·7	52·3	100
1915	57·8	16·3	74·1	25·9	100
1916	37·4	12·4	49·8	50·2	100
1917	47·5	24·1	71·6	28·4	100
1918	43·6	26·9	70·5	29·5	100
1919	46·2	27·3	73·5	26·5	100
1920	47·3	19·9	67·2	32·8	100
1921	39·2	21·4	60·6	39·4	100
1922	39·2	14·6	53·8	46·2	100

\* Year ended 31st December.

The proportionate distribution of the export trade between British and foreign countries has fluctuated greatly from year to year. The United Kingdom received more exports than any other country, but large quantities of the merchandise consigned to ports in Great Britain are re-exported. Exportation to other British countries has been variable. In 1916-17 the shipment of gold specie valued at £6,000,000 caused the proportion in this group to rise to 24 per cent., as compared with 12 per cent. in the previous year. In the following year the value of exports, chiefly foodstuffs, etc., for war purposes to India and Egypt, rose by £2,000,000; the figure for 1918-19 includes the value of large consignments of wheat sent to British ports for orders. In 1919-20 exports to India and Egypt diminished, but exports to New Zealand rose by £2,000,000 and remained at a high figure during the following year, then dropped to the former level in 1921-22. The exports to foreign countries, which declined during the first year of the war, showed a large increase in 1916, due to exports to the United States, including gold to the value of £7,500,000; the proportion in that year rose to 50 per cent.; during the succeeding three years it was under 30 per cent., but it has risen steadily since 1919.

The exports of Australian produce consist mainly of raw materials; particulars of the principal commodities exported during 1921-22 are shown below in comparison with the annual average during the five years ended 30th June, 1921. In regard to such commodities as wool, wheat, etc., for which there is constant demand, the quantity available for export depends mainly on local seasonal conditions, but the exportation of industrial metals



is influenced to a greater extent by market prices, and a movement up or down reacts promptly on the productive activity. The value of the trade in practically all the commodities enumerated in the table depends on the prices prevailing in the overseas markets :—

Commodity.	Quantity.		Value.		Per cent. of Total Value.	
	Annual Average, 1917-21.	Year ended June, 1922.	Annual Average, 1917-21.	1921-22.	1917-21.	1921-22.
Wool—greasy ... lb.	161,801,466	266,815,571	£ 10,531,082	£ 14,330,273	22·6	32·0
scoured ... lb.	33,080,675	48,760,388	3,161,147	3,295,078	6·8	7·4
tops ... lb.	4,523,177	4,229,353	1,577,702	816,182	3·4	1·8
			15,269,931	18,441,533	32·8	41·2
Skins and hides ..	...	...	2,904,521	1,473,559	6·2	3·3
Meats—frozen—						
Mutton and lamb lb.	26,020,608	42,949,633	626,030	999,299	1·3	2·2
Other ...	...	...	720,839	617,666	1·6	1·4
Tinned, etc. ...	...	...	1,316,437	286,222	2·8	·7
Leather ...	...	...	802,762	408,610	1·7	·9
Tallow ... cwt.	262,521	411,520	730,926	667,061	1·6	1·5
Butter ... lb.	18,437,412	36,321,017	1,598,043	2,293,770	3·4	5·1
Milk, condensed, etc. lb.	10,894,994	2,843,405	481,450	162,465	1·0	·4
Wheat ... cwt.	7,362,364	17,852,570	4,035,119	8,710,617	8·7	19·5
Flour ... cwt.	1,969,404	2,139,787	1,405,285	1,495,590	3·0	3·3
Copper—Ingots and matte ... cwt.	488,145	159,637	2,725,566	594,986	5·9	1·3
Lead—Pig and matte cwt.	1,517,021	1,268,272	2,277,394	1,494,006	4·9	3·3
Tin—Ingots and ore cwt.	57,950	18,416	715,738	147,056	1·5	·3
Coal ... tons	921,566	1,023,512	802,401	1,093,807	1·7	2·5
Timber, undressed sup. ft.	12,847,937	20,301,336	206,708	349,898	·5	·8
Bullion and specie ...	...	...	4,720,691	2,027,004	10·1	4·5
All other ...	...	...	5,252,936	3,465,758	11·3	7·8
Total ...	...	...	46,592,777	44,728,907	100·0	100·0

The value of the exports of domestic products depends mainly on the wool trade, which supplied 41·2 per cent. of the total value in 1921-22. The exports of wool in that year were considerably above the annual average during the previous five years, in regard to both quantity and value. The value of the wool sent to the United Kingdom was about  $7\frac{1}{2}$  millions sterling, and the direct exports to Continental ports in the aggregate reached a slightly higher figure, including France £3,732,000, Belgium £1,295,000, Italy £1,173,000, and Germany £1,104,000; Japan purchased wool to the value of £2,451,000, and the United States £1,331,000.

Next in importance is wheat, which, with flour, represented 22·8 per cent. of the value of Australian products; the quantity and the value of the wheat exported in 1921-22 were more than twice the annual average of the previous five years, and the value of the flour was slightly higher. Cargoes of wheat valued at £4,279,000 were sent to the United Kingdom, also flour to the value of £454,000; large consignments of wheat were exported to the continent of Europe, *e.g.*, to Italy £1,916,000; Germany £415,000; France £387,000; Netherlands £305,000; and other European countries £474,000. Wheat and flour sent to Eastern ports were valued at £1,389,000, and to Egypt £390,000; and flour to the value of £118,000 was exported to the South Sea Islands.

Butter exports represented 5·1 per cent. and meats 4·3 per cent., the bulk of these commodities being sent to the United Kingdom. The price of butter declined in oversea markets, so that while the quantity was twice as large as the annual average of the previous quinquennium the value was only 43 per cent. higher.

By-products of the pastoral industry—skins, leather, and tallow—represented 8·5 per cent. of the value of domestic exports. The value of these exports has declined considerably; the prices of skins and hides were abnormally high during 1919–20 and stimulated the trade to such an extent that the value of the exports in that year rose to £7,171,000; then prices fell, and the exports dropped in value to less than two millions in the following year. The United States received the largest proportion of the skins and hides during 1921–22, viz., £838,000, the United Kingdom £334,000, and sheep-skins to the value of £160,000 were sent to France.

Among the industrial metals, copper, lead, and tin showed a proportion of 4·9 per cent. of the exports in 1921–22, as compared with 12·3 per cent. during the previous quinquennium. The low prices during the last two years caused the value of trade to diminish, but the figures for New South Wales do not include the products of the Broken Hill mines which are dispatched oversea from South Australian ports. The value of the coal exported represented 2·5 per cent. The oversea trade in this product has increased since the removal of war-time restrictions, but a valuable trade with South American countries, upon which an embargo was placed early in the war period, has not been regained. Only 24,745 tons of coal were exported to these countries in 1921–22 as compared with 750,937 tons in 1913. New Zealand provided the main outlet for coal in 1921–22, and quantities valued at £421,000 were sent to Eastern ports.

Other exports of domestic products to Eastern ports were butter £213,000; pig lead (to Japan) £347,400; meats £154,000; tallow £325,800; leather £127,000; and condensed milk £108,000.

There has been a marked decrease in the export trade in a number of food commodities such as preserved meat, condensed milk, jams, biscuits, etc., which were exported in large quantities during the war period. The readiness with which production was increased then to meet the extraordinary demand is evidence of the fact that there is ample scope for development, and the recent decline in trade points to the necessity of securing new markets.

There is a fairly large re-export trade in provisions and manufactured articles with New Zealand, New Caledonia, Fiji, and other South Sea islands, but the principal item is copra, which is transhipped at Sydney for European ports. During the year ended June, 1922, copra to the value of £1,060,927 was re-exported, direct shipments to Germany being valued at £458,005; Netherlands, £220,892; United Kingdom, £173,885; and to France, £113,076. Other important items of foreign produce re-exported during the year were apparel and attire, £231,762; piece goods, £214,885; rice, £173,211; oils (bulk) £146,388; machinery, £116,223; metal manufactures, £93,105; spirits, £91,813; tea, £89,241; rubber manufactures, £63,436; tobacco, cigars, and cigarettes, £60,094; sugar, £59,127; and precious stones (unset) £50,729.

#### *Exports—Ships' Stores.*

The figures relating to the exports, as shown in the foregoing tables, do not include exports in the form of ships' stores. This branch of the trade

of the State has increased in importance, as will be seen from the following statement of the value of ships' stores exported in each year since 1918:—

Year ended 30th June.	Ships' Stores Exported.		
	Australian Produce.	Other Produce.	Total.
	£	£	£
1918	852,578	113,613	966,191
1919	920,981	120,615	1,041,596
1920	1,436,357	165,877	1,602,234
1921	2,028,728	300,969	2,329,697
1922	1,915,084	160,268	2,075,352

The most important items of Australian produce exported as ships' stores in 1921-22 were bunker coal, 1,173,833 tons, valued at £1,457,869; meat, fresh or smoked, 5,992,714 lb., £111,916; other meats, £58,230; butter, 408,772 lb., £33,314; milk, preserved, 551,240 lb., £20,684; flour, 22,527 cwt., £17,954; ale and beer, 56,618 gallons, £17,040; potatoes, 25,645 cwt., £10,132. The chief item of foreign produce was oil, 1,720,828 gallons, valued at £53,185.

#### CUSTOMS AND EXCISE TARIFFS.

When the Commonwealth was inaugurated in 1901 and control of customs and excise was transferred to the Federal Government, only a limited number of articles were subject to customs duty under the State tariff in New South Wales. The customs revenue was being derived mainly from taxes on spirits at the rate of 14s. per proof gallon; tobacco—manufactured, 3s. per lb., un-manufactured, 1s. per lb.; cigars and cigarettes, 6s. per lb.; raw sugar, 3s. per cwt., refined sugar, 4s. per cwt.; dried fruits, except dates, 2d. per lb.; ale and beer, in bulk, 6d. per gallon, and bottled, 9d. per gallon. The excise duties were as follows:—Spirits, 14s. per gallon; beer, 3d. per gallon; tobacco and cigars, 9d. per lb.; and cigarettes, 1s. 6d. per lb. At that time the tariffs in the other States, especially Victoria, were higher than in New South Wales, and in view of the provisions of the Constitution Act of the Commonwealth by which interstate trade became free, and the States were to be compensated for the loss of customs and excise revenue by the return of three-fourths of the revenue from this source collected by the Commonwealth, it was practically inevitable that the first Federal tariff, introduced in October, 1901, should involve a considerable increase, as compared with the New South Wales tariff, in the rates of duty and in the number of articles subject to duty. Nearly 88 per cent. of the goods imported into New South Wales in 1900 were on the free list, but as a result of the Federal tariff, the proportion, five years later, was only 32 per cent.; the average rate of duty on all dutiable goods had risen from 10·3 per cent. in 1900 to 16·5 per cent., and the rate on all goods except stimulants and narcotics from 4·3 per cent. to 10·9 per cent. The tariff of 1901 did not increase the rate of customs duty on spirits, which is one of the most important sources of customs revenue, but the tax on beer was doubled, an addition of 6d. per lb. was made in respect of tobacco, and the duty on sugar was increased to 6s. per cwt. A feature of the tariff was the imposition of *ad valorem* duties, ranging up to 30 per cent., on a number of articles, principally in the groups, apparel and textiles, metals, manufactures and machinery.

A Federal excise tariff also was introduced in October, 1901, and the most important changes, as compared with the State tariff which it replaced, were that the duty on tobacco was increased to 1s. per lb., the tax on cigars and cigarettes was doubled, and a duty of 1d. per lb. was imposed on starch. A duty of 3s. per cwt. was levied on sugar, but a rebate equal to £2 per ton was paid to growers who employed white labour.

In 1906 an Act was passed to give effect to an arrangement with the Government of South Africa for a reciprocal preference, but it did not affect appreciably the customs revenue as importations from South Africa were relatively small. This was the first instance of a preferential tariff in New South Wales.

An important revision of the tariff was made in accordance with proposals introduced in the Commonwealth Parliament in August, 1907, and embodied in the Customs Tariff Act of 1908. The new tariff was designed to give a larger measure of protection to local industries, and the list contained 450 items as compared with 139 in 1901. Many of the *ad valorem* rates were increased, though the imports on spirits and narcotics were not varied. Preferential rates were provided in favour of certain products of the United Kingdom, the preferential duty in the case of *ad valorem* rates being usually less by five than the general tariff rates per cent. In December, 1911, alterations, generally in the direction of higher duties, were made in some of the rates. During the war period the necessity for increased revenue in view of the heavy expenditure led to increases in the rates of customs and excise duties at various dates between December, 1914, and September, 1918, the taxes on spirits and tobacco being raised considerably.

In 1920 a complete revision of the tariff was commenced, the new rates being fixed with the object of fostering the development of local industries, and of giving preference to goods produced in the United Kingdom, reciprocal preference to goods produced elsewhere in the British Empire, and, in a lesser degree, to the products of foreign countries. The Minister for Customs, in introducing the tariff to Parliament, stated that it was the wish of the Government to see manufacturing industries established in the Commonwealth because primary production would be increased thereby and the growth of rural population stimulated. The proposals were introduced in March, 1920, and the revised tariff is contained in the Customs Tariff Act, 1921. The Act provides for three tariffs, viz., (1) British preferential, (2) intermediate, (3) general. The British preferential tariff applies to products of the United Kingdom, and by proclamation it may be applied, wholly or in part, to any part of the British Dominions, if the Tariff Board, in view of reciprocal arrangements, has reported upon the question and the Federal Parliament has agreed. Under similar conditions the intermediate tariff may be applied in respect of goods from any part of the British Dominions or from a foreign country. The general tariff is imposed on all goods to which the other tariffs do not apply. The Act of 1921 does not affect the existing preferential tariff on South African goods, except to provide that the duty on such goods may not be higher than the general tariff rates. Negotiations are proceeding with the object of arranging a new trade agreement with South Africa, and proposals for reciprocity with Canada are under consideration. With New Zealand an agreement has been concluded for reciprocity in relation to the tariff. In December, 1921, the Governor-General was authorised to issue a proclamation applying the British preferential tariff to goods produced in New Zealand, and another Act was passed in the following year to fix special rates in relation to certain imports from that country.

The tariff list of 1920-21 included a number of duties to come into operation on specified dates subsequent to the 16th December, 1921, the date of assent to the Act, and it is provided that any of these duties may be deferred upon the recommendation of the Tariff Board until the date when in the opinion of the Board, the goods will be produced locally in reasonable quantities and of satisfactory quality. The items in respect of which deferred duties were imposed include iron and steel sheets, plain, corrugated, and galvanised; hoop-iron and other items of metal manufactures; aeroplanes, ships, soda, citric and tartaric acid, and cream of tartar.

The Department of Trade and Customs issues an official guide to the tariff which shows in detail a classification, for purposes of duty, of all articles of import, and the rates of tax. In the following statement examples are given of the rates of customs and excise duty under the first Federal tariff and under the revised tariffs of 1907-08 and 1920-21:—

Dutiable Goods.	1902.	1908.	1921.		
			British Preferential.	Intermediate.	General.
CUSTOMS TARIFF.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Apparel and Attire—					
Articles made up, n.e.i. ... <i>ad. val.</i>	25	40	40	50	55
Socks and Stockings ... .. "	15	25	35	45	50
Piece goods—Cotton ... .. "	5	5	Free	5	15
Woollen ... .. "	15	30	30	40	45
Silk ... .. "	15	15	15	15	20
Furniture, n.e.i. ... .. "	20	35	35	45	50
Pianos, upright ... .. "	20	35	30	40	45
Machinery—					
Dynamo Electric Machines ... .. "	12½	12½	27½	35	40
Engines (gas and oil) ... .. "	12½	20	27½	35	40
Wire, barbed ... .. {	10	15	...	...	...
" netting ... .. {	s. d.	s. d.	s. d.	s. d.	s. d.
" .. .. .. "	...	...	68 0	85 0	105 0
" .. .. .. "	Free	Free	68 0	85 0	105 0
Iron and Steel—					
Bar, rod, etc. ... .. "	Free	Free	44 0	65 0	80 0
Plate and sheet (corrugated, } galvanized) ... .. }	15 0	30 0	{ 20 0 72 0*	27 6 90 0*	30 0 110 0*
Ale and Beer—bulk ... .. gal.	1 0	1 0	2 6	2 9	2 9
Whisky ... .. proof gal.	14 0	14 0	30 0	32 0	33 0
Wine, sparkling ... .. gal.	12 0	12 0	25 0	25 0	28 0
Tobacco—					
Manufactured ... .. lb.	3 3	3 6	5 4	5 4	5 4
To be manufactured locally (unstemmed) ... .. "	1 6	1 6	2 0	2 0	2 0
Sugar ... .. cwt.	6 0	6 0	6 0	6 0	6 0
Fish, tinned ... .. lb.	0 1	0 1	0 1	0 1½	0 2½
EXCISE TARIFF.					
Beer ... .. gal.	0 3	0 3	...	...	1 9
Rum, pure ... .. proof gal.	13 0	12 0	...	...	28 0
Starch ... .. lb.	0 1	0 1	...	...	0 1
Tobacco—manufactured ... .. "	1 0	1 0	...	...	2 4
Cigarettes ... .. "	3 0	3 0	...	...	7 3

\* Deferred duty.

The Customs Tariff (Industries Preservation) Act, 1921-22, provides for the imposition of special customs duties to prevent the dumping of foreign goods in Australia to the detriment of local industries. These duties, which are additional to those payable under the tariff, may be imposed, on the recommendation of the Tariff Board, in respect of the following:—(Sec. 4) goods sold for export at less than the fair market value in the exporting country, or (Sec. 5) below the price which may be considered reasonable in view of the costs of production, etc.; (Secs. 6 and 11) goods consigned to Australia to be sold at less than a reasonable selling price; (Sec. 7) goods carried in subsidised ships, or as ballast at rates lower than the prevailing rates of freight, or carried freight free; (Sec. 8) goods from a country in which the exchange value of the currency has depreciated to such an extent as to enable goods to be sold to an importer in Australia at prices detrimental to Australian industries; (Sec. 9) goods of a kind produced in the United Kingdom which, by reason of a depreciation in the exchange value of the currency of the country of origin in comparison with the currency of the United Kingdom, are sold to an importer in Australia at an export price less than the fair market value in the United Kingdom of similar goods; (Sec. 10) goods manufactured from material supplied from a country, of which the currency has depreciated by comparison with the country of manufacture, and sold to an importer in Australia at a price below the price of similar goods made from material produced in the country of manufacture.

The amount of special duty under Section 7 is 5 per cent. of the fair market value of the goods at the time of shipment, and generally, the special duties under other sections are sufficient to remove the advantage which dumped goods would have in comparison with other goods of a similar nature, if the special rates were not imposed.

Up to the end of October, 1922, proclamations had been issued to impose dumping duties in respect of the following:—

Section 4:

Pneumatic tyres and tubes exported by certain companies in Canada and the United States.

Section 8:

From Germany—Brushware, kinema machines, picture-frame mouldings, electric lamp carbons, gold paint, fancy leather purses, pianos.

From Belgium and Czecho-Slovakia—Brushware.

Section 9:

From Germany—Gold leaf, knitting machine needles, Eau de Cologne (certain brands), analytical balances, glazed tiles, cotton gloves, motor cars and chassis, dolls, dairy thermometers, mechanical toys.

From Austria—Press studs.

*Customs and Excise Revenue.*

The following statement shows the net amount of customs and excise revenue collected in New South Wales under each division of the tariff during 1921-22, in comparison with the figures for 1913. Sydney is an important distributing centre for the whole of Australia, consequently the collections in New South Wales include receipts for goods which were, in the

course of trade, transferred to and consumed in other States. On the other hand, they do not include receipts for goods transferred from other parts of Australia for consumption in New South Wales :—

Tariff Division.	Net Collections.	
	1913.	1921-22.
Customs—	£	£
1. Stimulants, Ale, Beer, etc. ... ..	1,240,524	980,337
2. Narcotics ... ..	577,828	1,071,270
3. Sugar ... ..	61,592	3,709
4. Agricultural Products and Groceries ... ..	394,048	411,056
5. Apparel and Textiles ... ..	951,949	1,857,294
6. Metals and Machinery ... ..	700,277	1,240,142
7. Oils, Paints, and Varnishes ... ..	120,442	172,338
8. Earthenware, etc. ... ..	182,239	230,911
9. Drugs and Chemicals ... ..	54,741	195,697
10. Wood, Wicker, etc. ... ..	222,475	255,150
11. Jewellery and Fancy Goods ... ..	123,696	316,075
12. Leather and Rubber ... ..	168,874	190,172
13. Paper and Stationery ... ..	103,552	306,506
14. Vehicles ... ..	106,106	232,471
15. Musical Instruments ... ..	69,120	92,490
16. Miscellaneous ... ..	131,362	219,995
Other Receipts ... ..	13,852	22,007
Total, Customs Duties ... ..	£5,222,677	£7,847,620
Excise—		
Beer ... ..	232,367	2,083,627
Spirits ... ..	188,281	631,657
Sugar ... ..	300,877	...
Tobacco ... ..	204,805	661,383
Cigars ... ..	1,083	16,802
Cigarettes ... ..	383,989	1,659,345
Starch ... ..	...	(—) 5
Licenses—Tobacco ... ..	2,227	{ 3,305 1,580
„ Other ... ..		
Total, Excise Duties ... ..	£1,363,629	£5,057,694
Total, Customs and Excise Duties ... ..	£6,586,306	£12,905,314

The customs revenue increased by 50 per cent. during the period under review, and the excise revenue by 27½ per cent.; the excise duties now contribute 39 per cent. of the customs and excise revenue as compared with 21 per cent. in 1913. Over 55 per cent. of the customs and excise revenue in 1921-22 was obtained from duties on stimulants, etc., and narcotics, viz., £7,104,421, the figures for 1913 being £2,878,877 or 44 per cent.

The customs collections in respect of stimulants, etc., declined from £1,240,524 to £980,337, or by 21 per cent., notwithstanding the higher rates of duty. On the other hand, the excise on beer and spirits rose from £470,648 to £2,715,284. The excise revenue from tobacco and cigarettes also has increased in a remarkable degree. The duties in respect of the group apparel and textiles yielded the largest proportion of the customs revenue in 1921-22, next in order being metals and machinery, narcotics, stimulants, etc.

The following table shows the net collections of Customs and Excise revenue during five years ended June, 1922 :—

	Year ended 30th June.				
	1918.	1919.	1920.	1921.	1922.
	£	£	£	£	£
Customs Duties.. ..	4,682,456	5,398,654	6,604,913	9,797,982	7,847,020
Excise Duties .. ..	1,938,115	2,836,683	4,011,019	5,025,018	5,052,814
Licenses .. ..	1,694	4,364	4,398	4,479	4,885
<b>Total £</b>	<b>6,617,265</b>	<b>8,239,701</b>	<b>10,620,330</b>	<b>14,825,479</b>	<b>12,905,819</b>
<b>Per head of population</b>	<b>£ s. d.</b> <b>3 8 10</b>	<b>£ s. d.</b> <b>4 3 10</b>	<b>£ s. d.</b> <b>5 4 3</b>	<b>£ s. d.</b> <b>7 1 11</b>	<b>£ s. d.</b> <b>6 1 4</b>

The increase in the collections during the year ended 30th June, 1920, was due to the fact that large quantities of goods were taken out of bond in anticipation of the new customs and excise tariffs which came into operation in March, when the proposals were laid before Parliament. The following year was characterised by abnormally heavy importations on which increased duties were collected, causing the customs revenue to rise by over 4 millions sterling.

#### TRADE REPRESENTATION IN OVERSEA COUNTRIES.

The future of the oversea trade of Australia depends to a large extent upon the opening of new outlets for staple exports, and the development of markets in oversea countries, and the question of providing official trade representation abroad has received special attention in recent years. While the bulk of the direct trade was with the United Kingdom, trade representation in other countries was left for the most part to private initiative, and the only official representation was in London. But the steady development of trade with America and with Eastern countries has rendered it advisable to extend the sphere of trade representation; in the East especially a rapid industrial expansion has created an enormous demand for raw materials, and New South Wales and the other Australian States should, by reason of natural conditions and geographical position, become most important sources of supply.

In London New South Wales is represented by the Agent-General appointed by the State Government, and by the High Commissioner for Australia, who is the official representative of the Commonwealth. These officers undertake important administrative duties on behalf of the respective authorities, *e.g.*, the negotiation of loans, and the supervision of assisted immigration. Attention is given also to trade matters; commercial officers collect and supply trade intelligence and conduct investigations in regard to continental markets. A trade representative attached to the High Commissioner's office is stationed in Paris.

In 1918 the Commonwealth Government initiated a policy of extending its trade representation into foreign countries by the appointment of a Trade Commissioner in the United States, with headquarters in New York. In 1920 the Bureau of Commerce and Industry outlined a comprehensive scheme of trade representation to include Great Britain and the United States, France, India, Straits Settlements and Java, South Africa, China, Japan, and South America; and in the following year an office was opened by an Australian Trade Commissioner in China, headquarters being at Shanghai.



For many years New South Wales was represented in Eastern Asia by a Commercial Commissioner, with headquarters at Kobe, Japan, but in 1922 the office was abolished, and the Commonwealth Government has appointed an additional Trade Commissioner in the East.

A Trade Commissioner, appointed by the British Board of Trade, is stationed at Sydney, and furnishes the Board with commercial information and advice with regard to openings for Imperial trade; a Trade Commissioner for France also resides in Sydney.

#### CHAMBERS OF COMMERCE.

Chambers of Commerce have been established by persons engaged in commercial pursuits in Sydney and in other trading centres throughout New South Wales, with the object of promoting the internal and external trade and commerce and the industries of the State. The Chambers consider questions connected with these matters, collect and circulate commercial and industrial information, undertake arbitration in trade disputes, and advance measures for the extension of commercial and industrial enterprise. In addition to individual members, the membership includes representatives of mercantile firms and societies and other organised bodies. There were 1,600 members of the Sydney Chamber of Commerce in 1922, and Chambers, numbering twenty-nine, in the following centres were affiliated:—Newcastle, Albury, Auburn, Ballina, Bankstown, Bellinger River, Bowral, Casino, Coff's Harbour, Cowra, Dungog, Forbes, Goulburn, Grafton, Grenfell, Hornsby, Hurstville, Illawarra, Katoomba and Leura, Kempsey, Kogarah, Lismore, Liverpool, Maitland, Manilla, Orange, Parramatta, Rockdale, and Young.

## SHIPPING.

OWING to the geographic position of New South Wales, the progress of the national industries is dependent to an unusual degree upon shipping facilities, and efficient transport services are essential to maintain regular and speedy communication and to place the staple products upon distant markets in a satisfactory condition without unduly increasing the cost. Improvement in the methods of carrying perishable products has promoted the growth of a permanent export trade in such commodities as frozen meat and butter; and in the construction of modern ships special provision is made for refrigerated cargo. Following a period of rapid expansion, the war caused great disorganisation in the shipping trade; after the cessation of hostilities the services were remarkably active for a time, then the effects of a world-wide depression became evident though they were not so severe as in other countries.

### CONTROL OF SHIPPING.

Prior to the inauguration of the Commonwealth in 1901, the shipping of New South Wales was regulated partly by an Imperial enactment, the Merchant Shipping Act, 1894, and partly by the laws of the Parliament of New South Wales. Under the Commonwealth Constitution the Federal Parliament is empowered to make laws with respect to trade and commerce with other countries and among the States, including navigation and shipping, and in relation to such matters as lighthouses, lightships, beacons, and buoys and quarantine.

Special legislation relating to navigation and shipping is contained in the Federal Navigation Act, 1912-20, which is drafted on the lines of the Merchant Shipping Act and of the Navigation Acts of New South Wales and embodies the rules of an international convention for Safety of Life at Sea signed in London in 1914. The commencement of the Act was delayed on account of the war and it is being brought into operation in sections as it contains provisions involving great changes in existing standards and conditions, which if proclaimed simultaneously would cause difficulty in administration and disorganisation of the shipping services.

The provisions of the Act which apply to ships registered in Australia, apply also to other British ships on round voyages to or from Australia. The Governor-General may suspend its application to barges, fishing boats, pleasure yachts, missionary ships, or other vessels not carrying passengers or goods for hire; and the High Court of Australia has decided that clauses relating to manning, accommodation, and licensing do not apply to vessels engaged in purely intra-state trade.

Portion of the Act relating to the coasting trade was proclaimed on 1st July, 1921. A ship may not engage in the coasting trade of Australia unless licensed to do so, and a license may not be granted to a ship in receipt of a foreign subsidy. Licensees, during the time their ships are so engaged, are obliged to pay to the seamen wages at current rates ruling in Australia, and, in the case of foreign vessels, to comply with the same conditions as to manning and accommodation for the crew as are imposed on British ships. The manning scale of officers and seamen which must be provided is set forth in schedules of the Act, and the employment of aliens on British ships is restricted. Power is reserved to the Minister for Trade and Customs to grant permits, under certain conditions, to unlicensed British ships to engage in the coasting trade if a licensed British ship is not available for the service,

or if the service by licensed shipping is inadequate. A permit may be continuing, or for a single voyage.

The accommodation, remuneration, and other conditions, as prescribed for licensed vessels in the coasting trade, are far in advance of the legal provisions for the well-being of the mercantile marine in any other country. Consequently the Navigation Act has the practical effect of excluding from trade between Australian ports all except Australian vessels, though it does not prohibit specifically the licensing of ships of other nationalities, unless in receipt of foreign subsidy.

A section of the Act prescribes that all vessels engaged in interstate and oversea trade, of at least 1,600 tons (gross), or carrying more than twelve passengers, must carry an approved wireless installation and one or more certificated operators and watchers according to the class of ship and the nature of the trade in which it is engaged.

On 1st March, 1922, sections of the Act relating to the employment of seamen became operative; stringent provisions were made for regulating the engagement and discharge of seamen, and to guard against malpractices such as "crimping", to protect the rights of persons engaged in seafaring occupations, and to ensure efficiency in regard to rating.

Ships engaged in interstate and oversea trade carrying at least 100 persons on voyages where the distance between consecutive ports of call exceeds 600 miles are required to carry a duly qualified medical practitioner, or if carrying ten and less than 100 persons, a person qualified to render "first aid."

The parts of the Act which have not yet been proclaimed relate to the issue of certificates of competency to officers, the supervision of the health of seamen, the protection of their property, the relief of distress amongst seamen and their families, and matters relating to the seaworthy condition of ships, provision for safety of life at sea, pilotage, and Courts of Marine Inquiry. Such matters are still regulated under the State Navigation Act of 1901.

The State Department of Navigation exercises control over the ports of New South Wales and administers the Wharfage and Tonnage Act, 1920, which authorises the collection of shipping rates and port dues, except in Sydney Harbour, which is subject to the control of the Sydney Harbour Trust.

Matters relating to seaboard quarantine are administered by the Commonwealth in terms of the Quarantine Act, 1908-20, and arrangements may be made with the State Government to aid in carrying out the law. The Act defines the vessels, persons, animals, plants, and goods which are subject to quarantine, and provides for examination, detention, and segregation in order to prevent the introduction or spread of diseases or pests. Imported animals or plants may not be landed without a permit granted by a quarantine officer. The master, owner, and agent of a vessel ordered into quarantine are severally responsible for the expenses, but the Commonwealth Government may undertake to bear the cost in respect of vessels trading exclusively between Australasian ports. Quarantine expenses in the case of animals and goods are defrayed by the importer or owner.

Vessels arriving from oversea ports are examined by quarantine officers only at the first port of call in Australia unless they have travelled along the Northern trade route, when they are inspected again at the last port of call. The quarantine station of New South Wales is situated in Sydney Harbour, near the entrance to the port.

The liability of shipowners, charterers, etc., in regard to the transportation of goods is defined by the Sea Carriage Acts passed by the Commonwealth and

the State Parliaments. The Commonwealth Act passed in 1904 applies in relation to the interstate trade and to the outward oversea trade of Australia, and the State Act passed in 1921 applies similar provisions to the intra-state trade. The Acts nullify clauses in bills of lading or similar documents which purport to relieve the shipowner or charterer from liability for loss or damage to goods arising from the improper condition of any part of the ship in which cargo is carried, or arising from negligence in the handling or care of the goods; or to lessen the obligations of the shipowner or charterer to exercise due diligence, to man and equip the ship, to keep it seaworthy, and to keep in a fit state the hold, refrigerating chambers, and other parts in which cargo is carried; or to lessen the obligations of the master, agent, or servants of a ship, to handle the goods carefully and to deliver them properly.

#### OVERSEA AND INTERSTATE SHIPPING.

The figures in this chapter relating to shipping are exclusive of particulars concerning ships of war, cable-laying vessels, and yachts, which are not included in the official shipping records. Where tonnage is quoted it is net tonnage.

#### *Vessels Entered and Cleared.*

In compiling the records of oversea and interstate shipping, a vessel is treated as an entry once and as a clearance once for each voyage to and from New South Wales, being entered at the first port of call, and cleared at the port from which it departs. The repeated voyages of every vessel are included.

The aggregate number and tonnage of interstate and oversea vessels which arrived in and departed from ports of New South Wales in various years since 1901, with the average net tonnage per vessel, are shown in the following statement:—

Year ended 30th June.	Entries.		Clearances.		Average Tonnage per Vessel.
	Vessels.	Net Tonnage.	Vessels.	Net Tonnage.	
1901*	2,760	4,133,200	2,853	4,274,101	1,498
1906*	2,893	5,283,719	2,883	5,275,031	1,828
1911*	3,127	6,822,135	3,146	6,833,782	2,177
1913*	3,393	8,117,501	3,375	8,071,101	2,392
1916	3,045	6,552,235	3,062	6,574,582	2,149
1917	2,602	5,803,451	2,613	5,802,683	2,226
1918	2,226	4,407,399	2,235	4,417,390	1,978
1919	2,335	4,452,004	2,275	4,301,617	1,899
1920	2,248	5,356,136	2,288	5,380,653	2,367
1921	3,019	7,123,331	3,023	7,122,209	2,358
1922	2,891	7,182,341	2,883	7,065,996	2,468

\* Year ended 31st December.

The shipping trade of New South Wales increased rapidly during the three years before the war, and the tonnage entered in 1913 was greater by 4,000,000, or by 96 per cent., than in 1901. During the war period, abnormal conditions caused the tonnage to decline in each year, until in 1917-18 it was only 274,000 tons greater than in 1901. Trade commenced to improve in 1919, and the tonnage increased rapidly during 1920-21. There was a slight increase in the tonnage entered in 1921-22, but the clearances were somewhat lower, so that the total tonnage was approximately the same as in the previous year.

The average size of the vessels engaged in trade with New South Wales rose from 1,500 tons in 1901 to 2,400 tons in 1913, then declined to 1,900 tons during the war period, when scarcity of shipping caused smaller vessels to be commissioned for oversea voyages; the average has since risen above the pre-war figure.

A noticeable feature of the shipping records of New South Wales is the large proportion of tonnage entering in ballast and the small proportion which clears without cargo. The majority of empty ships come from ports of the neighbouring States and New Zealand, where, in some cases, they have delivered a general cargo and have cleared for Newcastle, in this State, to load coal. In 1921-22 the tonnage entered in ballast amounted to 1,544,020 tons, or 21·5 per cent. of the total entries, and 326,421 tons, or 4·6 per cent., were cleared without cargo.

Sailing vessels are not engaged extensively in the trade of New South Wales, and they represented less than 1 per cent. of the total tonnage in 1921-22, when the entries included 79 sailers with an aggregate tonnage of 55,087 tons, and the clearances 89 vessels, 68,632 tons.

A comparison of the shipping of the Australian States shows that the tonnage trading to and from New South Wales is far in excess of the figures of any other State. The following statement shows the entries and clearances during the year ended 30th June, 1922, exclusive of the coastal trade :—

State.	Oversea and Interstate.			
	Entries.		Clearances.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales ... ..	2,891	7,182,341	2,883	7,065,993
Victoria ... ..	2,442	5,506,127	2,436	5,518,393
Queensland ... ..	757	1,985,283	755	1,947,150
South Australia ... ..	1,087	3,524,380	1,081	3,519,332
Western Australia ... ..	879	3,273,487	868	3,221,586
Tasmania ... ..	1,166	1,073,776	1,098	1,068,561
Northern Territory ... ..	32	93,421	30	84,835

#### NATIONALITY OF VESSELS.

The trade of the State of New South Wales, to a very great extent, is carried under the British flag, the deep-sea trade with the mother country and British Possessions being controlled chiefly by shipowners of the United Kingdom, and the interstate trade by local shipowners. The table below distinguishes British and foreign shipping at intervals since 1901.

Year ended 30th June.	Tonnage Entered and Cleared.				Percentage.		
	Australian.	Other British.	Foreign.	Total.	Australian.	Other British.	Foreign.
1901*	3,348,502	3,714,217	1,344,582	8,407,301	39·8	44·2	16·0
1906*	3,899,230	4,920,850	1,738,670	10,558,750	36·9	46·6	16·5
1911*	4,645,195	6,594,649	2,416,073	13,655,917	34·0	48·3	17·7
1913*	5,711,398	7,470,714	3,006,490	16,188,602	35·3	46·1	18·6
1916	5,503,406	6,079,371	1,544,010	13,126,817	41·9	46·3	11·8
1917	4,833,745	5,438,046	1,331,343	11,603,134	41·6	46·9	11·5
1918	4,265,496	3,348,204	1,211,089	8,824,789	48·4	37·9	13·7
1919	3,703,322	3,732,713	1,317,586	8,753,621	42·3	42·6	15·1
1920	3,329,412	5,755,223	1,652,154	10,736,789	31·0	53·6	15·4
1921	4,739,555	6,739,914	2,766,071	14,245,540	33·3	47·3	19·4
1922	5,659,061	6,823,443	1,765,833	14,248,337	39·7	47·9	12·4

\* Year ended 31st December.

The decline in the percentage of Australian tonnage between 1918 and 1920 was mainly the result of an arrangement by which the interstate steamers were requisitioned by the Commonwealth Government in April, 1918, and were run as one fleet; thus it was possible to release from the interstate trade a number of vessels representing approximately 45 per cent. of the interstate tonnage, and to dispatch them to oversea ports. The steamers were released from Government control two years later, but the owners who are associated as the Australian Steamship Owners' Federation continue to run them as one fleet. During the last two years there has been a marked increase in the Australian tonnage and in the year ended June, 1922, it was almost as large as in 1913.

The "Other British" tonnage has increased largely since 1918, and the volume of foreign shipping shows a tendency to rise; the foreign tonnage increased in 1920-21 owing to the arrival of a large number of ships to obtain coal at Newcastle.

Particulars relating to the nationality of vessels engaged in trade with New South Wales in 1913, and in the last two years, are shown in greater detail in the following statement:—

Nationality of Shipping.	Entries and Clearances.						Tonnage— Percentage of each Nationality.		
	1913.*		1920-21.		1921-22.		1913.*	1920-21.	1921-22.
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.			
British—									
Australian ..	3,231	5,711,398	2,904	4,739,555	3,249	5,659,061	35·3	33·3	39·7
New Zealand ..	771	1,350,138	290	321,420	217	222,901	8·4	2·2	1·6
United Kingdom ..	1,589	6,081,117	1,608	6,267,994	1,542	6,281,834	37·5	44·0	44·1
Other British ..	22	30,459	74	150,500	131	318,703	·2	1·1	2·2
Total ..	5,613	13,182,112	4,885	11,479,469	5,139	12,482,504	81·4	80·6	87·6
Foreign —									
Denmark ..	2	768	16	58,790	15	54,785	·0	·4	·4
France ..	150	313,252	103	120,743	82	149,378	1·9	·9	1·1
Germany ..	487	1,533,728	..	..	..	..	9·5	..	..
Italy ..	29	47,770	29	107,610	49	145,348	·3	·8	1·0
Netherlands ..	52	128,870	97	315,795	90	307,563	·8	2·2	2·2
Norway ..	183	353,843	93	179,041	87	174,958	2·2	1·3	1·2
Sweden ..	23	57,643	39	121,353	38	118,223	·4	·9	·8
Japan ..	103	332,471	444	1,159,010	152	465,125	2·0	8·1	3·3
United States of America ..	76	148,853	290	604,454	113	318,076	·9	4·2	2·2
Other Nationalities	50	89,292	46	90,275	18	32,377	·6	·6	·2
Total ..	1,155	3,006,490	1,157	2,766,071	635	1,765,833	18·6	19·4	12·4
Grand Total ..	6,763	16,188,602	6,042	14,245,540	5,774	14,248,337	100·0	100·0	100·0

\* Year ended 31st December.

The proportion of Australian tonnage in 1921-22 was higher than in 1913, though the actual tonnage was somewhat less; when all the steamers of the Commonwealth Government Line are in commission it is probable that there will be a marked increase. The tonnage owned in the United Kingdom was higher, absolutely and relatively, than before the war, but there has been a decided decrease in New Zealand tonnage. The shipping classified as other British has increased mainly as a result of the inauguration of services by Canadian lines, of which the tonnage, 245,985, in 1921-22, represented 1·7 per cent. of the total entries and clearances.

In 1913 the largest proportion of foreign tonnage was German, amounting to 9·5 per cent. of the total shipping. German ships were excluded in 1914, and did not re-enter the trade during the period under review, but more recent records show that a few German ships have arrived in Australian ports since 1st August, 1922, the date of the resumption of trade with Germany. During the war period Japanese and American tonnage began to take an important part in the oversea trade of New South Wales, and between 1913 and 1920-21 the Japanese tonnage rose from 2 per cent. to 8·1 per cent., and the United States from ·9 per cent. to 4·2 per cent. In the succeeding year there was a decrease, especially in respect of the Japanese tonnage, indicating that much of the trade supplied by Japan as a result of the war conditions is reverting to other countries. In 1921 a large number of Japanese and American ships were employed to carry coal to Europe during the general dislocation in the British coal-mines, which lasted from April to July.

French tonnage has declined since the war, but steamers of that nationality are gradually resuming regular services to Australia. Italian lines are absorbing an increasing proportion of the oversea trade of the State, and have established a regular service between Genoa and Australia. Other European countries with increased tonnage in the Australian trade are the Netherlands, Denmark, and Sweden.

The foreign tonnage in 1921-22 was only 12·4 per cent. of the total, as compared with 19·4 per cent. in the previous year, and 18·6 in 1913, but there are indications that foreign shipowners are endeavouring to increase the direct trade between Australia and their respective countries. In 1921-22, of the Australian tonnage, 4,718,867 tons, or 83 per cent., represented entries and clearances in the interstate trade, and 940,914 tons in the oversea trade, the tonnage to and from the United Kingdom being 220,915 tons, and New Zealand 267,693. Of the other British tonnage, including ships owned in the United Kingdom, 1,978,690 tons were entered from, and cleared for, interstate ports, and 2,171,832 tons plied between Australia and the United Kingdom. The tonnage belonging to other nations was employed chiefly in the foreign trade.

#### DIRECTION OF SHIPPING TRADE.

The shipping records do not disclose the full extent of communication between New South Wales and other countries, as they relate only to terminal ports and are exclusive of the trade with intermediate ports, of which some are visited regularly by many vessels on both outward and inward journeys. But the following statement of the tonnage entered from, and cleared for, interstate ports and oversea countries, grouped according to

geographical position, indicates, as far as practicable, the growth or decline of shipping along the main trade routes since 1913 :—

Country.	1913.		1920-1921.		1921-22.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
Australasian States ... ..	3,931	8,087,899	3,206	6,382,297	3,454	7,093,616
New Zealand ... ..	649	1,453,215	769	1,473,057	531	1,077,654
Europe ... ..	803	3,440,944	582	2,798,459	599	2,941,692
Africa ... ..	69	149,074	81	225,856	99	311,768
Asia and Pacific Islands ... ..	734	1,566,433	1,009	2,179,040	815	1,799,395
North and Central America ... ..	281	818,361	299	1,003,137	258	995,837
South America ... ..	301	672,736	96	183,694	18	28,375
Total ... ..	6,768	16,188,602	6,042	14,245,540	5,774	14,248,337

Shipping to and from the other Australian States in 1921-22 was greater by 711,000 tons than in the previous year, though it was less by nearly a million tons than in 1913; a factor in the decline, as compared with pre-war years, is the arrangement already mentioned for the economical employment of the interstate fleet. There was a marked decline in respect of the New Zealand trade. Tonnage to and from the United Kingdom and other European countries was somewhat higher than in 1920-21, but it showed a decline of a million and a half tons as compared with 1913. Trade along the Eastern and Pacific Island trade routes increased by 70 per cent. between 1913 and 1919-20, and then declined by 17 per cent. The tonnage engaged in trade with North and Central America was higher than in 1913, but the South American trade, which was mainly for the export of coal, has lost its former importance.

The interstate and oversea trade of New South Wales is confined practically to three centres, viz., Sydney, Newcastle and Port Kembla, and the distribution amongst the ports of the inward trade in 1913, and in each of the last five years, is shown in the following table. On each voyage a vessel is counted as an entry only at the first port of call in New South Wales and intra-state trade is excluded, therefore the figures do not indicate the total tonnage entered at each port.

Year ended 30th June.	Port Jackson (Sydney).		Port Hunter (Newcastle).		Port Kembla.		Other Ports.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1913*	2,275	6,174,321	906	1,771,032	67	87,488	145	84,660
1918	1,511	3,297,621	1,200	1,031,506	38	55,236	57	23,936
1919	1,573	3,223,631	676	1,172,724	41	43,709	45	11,940
1920	1,487	3,812,772	696	1,460,916	36	71,162	29	11,256
1921	1,863	4,773,182	1,082	2,255,040	42	85,514	26	6,595
1922	1,811	4,934,876	985	2,066,868	53	116,593	42	14,004

\* Year ended 31st December.

It is the practice of many vessels, including steamers engaged regularly in the trade of New South Wales, to discharge cargo at Sydney, then to proceed to Newcastle for coal; such vessels are counted as entries at Sydney only, therefore the inward shipping of Newcastle is greatly in excess of the



tonnage stated in the table. During the last two years an unusually large number of vessels sailed from oversea countries direct for Newcastle to load coal for European ports. The trade of Port Kembla has increased steadily during the last four years as a result of the establishment of important industries in the locality. The decline in the inward trade of other ports, as compared with the year 1913, is due mainly to the omission of Twofold Bay as a port of call for interstate vessels.

#### HARBOURS AND ANCHORAGES.

Along the coast of New South Wales, there are numerous ports, estuaries, and roadsteads, which provide shelter to shipping and afford facilities for trade.

There are four natural harbours where vessels of deep draught may enter, viz., Port Stephens, Broken Bay, Port Jackson (Sydney Harbour) and Jervis Bay; Port Jackson ranks first by reason of extent, natural facilities, and volume of trade. Artificial harbours have been constructed at Coff's Harbour, Wollongong, Port Kembla, Shellharbour, Kiama, and Ulladulla; with the exception of Port Kembla, they are useful only for small vessels. There are a number of estuarine harbours, but the entrances are usually blocked to some extent by sandbars, formed by the combined action of ocean currents and waves and wind; and there are also numerous roadsteads or anchorages which afford shelter to vessels of moderate draught during southerly or south-easterly weather. Breakwaters and training-walls have been constructed to control the sand movement at the majority of the bar harbours, so that the navigating channels may be maintained with little difficulty.

#### *Sydney Harbour.*

Port Jackson (Sydney Harbour) is the principal port of New South Wales. It has a safe entrance and deep waters, and its steep foreshores provide good shelter for vessels at anchor; it is almost landlocked, resembling a lake rather than a seaport. The entrance, which is three-quarters of a mile wide, lies between bluff headlands, and faces eastward, so that it is protected from southerly gales, which expend their violence on North Head instead of sweeping directly into the harbour, to the inconvenience of shipping.

At the Heads the depth of water is 80 feet, and near the entrance the fairway divides into two channels about half a mile long, each having a depth of 40 feet, which could be increased if required, as the bottom is sand. The eastern channel is 700 feet wide, and is protected entirely by South Head, so that very little allowance need be made for scend; the channel is well lighted, and may be used by very large vessels by night as well as by day. The western channel is naturally shallower and narrower than the eastern, but it has been improved to give a depth of 40 feet and a width of at least 500 feet. As far as practicable the eastern channel is reserved for outgoing vessels and the western for incoming traffic.

The total area of Port Jackson is 14,260 acres, or about 22 square miles. The coastline, being irregular, is over 188 miles in length, and gives facilities for extensive wharfage. The area which may be designated the harbour proper, embraced by 75 miles of foreshores, i.e., below the Iron Cove, Parramatta River, and Lane Cove bridges, and the Spit, Middle Harbour, covers 8,980 acres. About three thousand acres have a depth ranging from 35 to 160 feet at low water, ordinary spring tide, and excluding the fairway and the bays in which most of the shipping is accommodated at present, there are over 1,000 acres suitable for anchoring deep-sea vessels. The rise and fall of the tide in the harbour is from 3 feet to 6 feet.

The control of the Port was vested in the Sydney Harbour Trust in the year 1901. Previously the wharves, with few exceptions, were under private control; the wharfage had been constructed and the foreshores laid out, without system or co-ordination, to meet individual requirements, and the condition of the waterside had become so insanitary as to constitute a serious menace to the health of the City. Therefore, the Government resumed all the wharves and adjoining properties and constituted the Trust, which consists of three Commissioners appointed for a term of seven years, with control over the port and shipping, harbour lights, buoys and wharves, and authority to undertake works for the preservation and improvement of the port, to appropriate wharves, stores, etc., to special uses, and to levy rates and charges in respect of vessels and goods, and for the use of property.

The Trust was debited with the value of the resumed property and improvements, amounting to £4,700,000; and, by reason of extensive improvements effected under a comprehensive scheme of reconstruction, the capital debt, as at 30th June, 1922, was more than twice that sum. The shipping accommodation has been largely remodelled, old wharves being replaced and new wharves and jetties and sheds constructed to keep pace with a rapidly increasing trade; the depth of water has been increased in various parts of the harbour, a sea-wall has been built, the approaches have been improved, and a roadway, 100 feet wide, has been constructed along portion of the water-front. Amongst the property under the administration of the Harbour Trust is a considerable area adjoining the water-front, embracing dwellings, shops, and stores. The area has been improved greatly by the demolition of old buildings to permit the widening of the streets and the erection of modern dwellings for waterside workers and of business premises and stores.

The principal wharves are situated in close proximity to the business centre of the city, about 4 or 5 miles from the Heads. Excluding ferry wharves and jetties used for private purposes, there are 60,601 feet of wharfage under the control of the Trust; the principal wharves are leased to the various shipping companies whose vessels engage regularly in the trade of the port, and open wharves are reserved for vessels which visit the port occasionally.

The location of the wharves and the berthing accommodation for ocean-going vessels are shown below:—

Locality.	Number of Berths.	Length of Berths.
Woolloomooloo Bay ... ..	12	ft. 5,629
Circular Quay ... ..	10	3,953
Walsh Bay ... ..	12	6,885
Darling Harbour ... ..	97	34,294
Blackwattle Bay ... ..	29	4,366
Rozelle Bay ... ..	11	1,984
White Bay ... ..	8	3,490
Total ... ..	179	60,601

The berths in Woolloomooloo Bay are used in connection with a general oversea trade; commodious sheds have been erected on the wharves and electric conveyors installed. The southern portion of Circular Quay is used exclusively for ferry traffic, but ten berths are available on the eastern and western sides for large mail steamers. In Walsh Bay the waters are deep, and advantage was taken of the steep shore to increase the capacity of the

jetties by erecting sheds of two storeys, the upper floors having access by means of bridges to streets on a higher level. Darling Harbour is the main shipping locality; it contains 97 berths of an aggregate length of 34,294 feet, and some of them are directly connected with the railway system.

On a spit of land, known as Glebe Island, lying between Rozelle Bay and White Bay, works have been constructed to facilitate the shipment of wheat in bulk. Grain brought by rail from the country districts may be unloaded from the trucks, at the rate of 80,000 bushels per hour, into a large terminal elevator, and it may be delivered from the elevator into the holds of vessels at the rate of 60,000 bushels per hour, four vessels being loaded simultaneously.

Special facilities are available along the waterside for other important classes of trade, such as wool stores fitted with appliances to expedite the handling of the staple product, and accommodation is reserved for the storage of copra and explosives; by private enterprise, a plant has been installed at Ball's Head, where bunkers may be replenished rapidly with coal or oil.

The wharves are situated on the southern shore of the port, and the northern is used mainly for residential sites. Parliamentary authority was given recently for the construction of a high-level cantilever or arch bridge across the harbour from Dawes Point to Milson's Point, and when the bridge is built it is probable that wharfage will be provided on the northern shore.

There are nine islands in Port Jackson. Four are reserved as public pleasure resorts; Garden Island is used as a dépôt by the Australian Navy, and Goat Island by the Harbour Trust, whose fire-fighting appliances, including three vessels, are stationed there. The principal docks are situated on Cockatoo Island, and Spectacle Island is used for the storage of explosives. Fort Denison, used formerly for defence purposes, is now a lighthouse.

An account of the dock accommodation provided in Sydney Harbour is shown on a later page.

The number and tonnage of vessels which entered Sydney Harbour during the last five years, as recorded by the Harbour Trust, are shown below; the figures differ from those in the table on page 134 as they include vessels engaged in the coastal trade, also vessels which do not report to the Customs authorities on return from a journey to Newcastle for bunker coal:—

Year ended 30th June.	Coastal.		Oversea and Interstate.		Total Trade.	
	Number.	Net Tonnage.	Number.	Net Tonnage.	Number.	Net Tonnage.
1918	5,674	1,380,163	1,864	3,940,234	7,538	5,320,400
1919	5,577	1,305,751	1,922	3,846,915	7,499	5,152,666
1920	5,803	1,415,525	1,742	4,387,859	7,545	5,803,384
1921	6,493	1,634,493	2,205	5,601,760	8,698	7,236,253
1922	6,240	1,532,243	2,242	6,009,118	8,482	7,541,361

There was a marked increase in the number and tonnage of vessels entering the harbour in 1920-21, when the oversea trade of the State was exceptionally large; in the following year the tonnage was greater by 305,100 tons, though the number of vessels was smaller, as a decrease occurred in respect of the coastal trade.

The proportion of sailing vessels is decreasing rapidly, and the number which entered in 1921-22 was only 142, with a tonnage of 68,463, as compared with 332 vessels and a tonnage of 169,024 in 1917-18.

The following statement shows the latest tonnage figures, including coastwise, for the principal ports of Australasia and the United Kingdom; the figures include tonnage which arrived at the respective ports, although not recorded as entered by the Customs Department :—

Port.	Tonnage. Arrivals incl. Coastwise.	Port.	Tonnage. Arrivals incl. Coastwise.
<i>Australia—</i>		<i>England—</i>	
Sydney ... ..	7,541,361	London ... ..	16,519,347
Melbourne ... ..	9,669,927	Liverpool (including	
Newcastle ... ..	4,567,632	Birkenhead) ... ..	12,778,674
Port Adelaide* ...	3,040,229	Cardiff ... ..	9,631,849
Brisbane ... ..	2,215,273	Newcastle and Shields	8,391,340
Fremantle ... ..	2,521,951	Southampton ... ..	4,895,070
Townsville ... ..	943,665	Hull ... ..	3,553,588
Albany ... ..	745,119	Newport ... ..	3,132,050
Hobart ... ..	542,746	<i>Scotland—</i>	
Port Kembla ... ..	456,999	Glasgow ... ..	4,533,191
<i>New Zealand—</i>		Leith ... ..	1,186,209
Wellington ... ..	2,697,751	<i>Ireland—</i>	
Auckland ... ..	1,761,496	Dublin ... ..	2,728,031
Lyttelton ... ..	1,516,021	Belfast ... ..	3,026,518

\* Exclusive of Coastwise Shipping—not available.

The revenue and expenditure by the Sydney Harbour Trust during each of the last five years are shown in the following statement, also the capital debt at the end of each year :—

Year ended 30th June.	Capital Debt.	Revenue.	Expenditure.				Surplus.
			Working Expenses.	Renewals and Re- placements.	Interest.	Total Ex- penditure.	
	£	£	£	£	£	£	£
1918	8,796,521	576,459	151,017	19,837	348,023	518,877	57,582
1919	8,691,972	618,901	159,821	20,078	336,823	516,722	102,179
1920	8,959,887	658,313	186,458	19,992	353,037	559,487	98,826
1921	9,449,213	797,211	224,676	20,088	438,210	682,974	114,237
1922	9,868,165	827,122	236,058	25,062	488,552	749,672	77,450

During the year 1921–22, the revenue represented 8·56 per cent. of the capital debt, and the ratio of working expenses to the revenue was 28·5 per cent. After deducting interest charges and the expenditure from the Public Works Fund on renewals and replacements, there was a surplus on the year's transactions of £77,450.

The principal sources of revenue in 1921–22 were wharfage rates, which amounted to £451,982, and rents for wharves, jetties, stores, etc., £178,860; and the chief items of expenditure were head office salaries and contingencies, £54,472, and maintenance of property, £41,057.

#### *Newcastle Harbour.*

Newcastle Harbour (Port Hunter) is the second port of New South Wales and the third port of Australia in regard to the volume of its shipping trade. The harbour lies in the course of the Hunter River, and its limits are not defined, but an area of about 990 acres is enclosed by about 8 miles of coast-line, extending on the western side as far as Port Waratah, omitting Throsby Creek, and on the eastern side to a point due east of the southern end of Moscheto Island. The area used by shipping is about 570 acres, excluding

the entrance to the harbour and the inner basin, which together cover an area of 162 acres. The width at the entrance is 19 chains, and the navigable channel is 350 feet wide; the minimum depth is 23 feet 6 inches at low water ordinary spring tides, but vessels which draw 27 feet can enter at high water; it is proposed to increase the depth at the entrance to 32 feet.

The harbour is landlocked sufficiently to render it safe for vessels in all kinds of weather, and breakwaters have been erected to improve the entrance and to prevent the ingress of sand from the ocean beaches.

Newcastle is primarily a coal loading port, and the proximity of the coalfields has led to the establishment of important industries, including iron and steel works, in the district, so that trade in other commodities is likely to develop steadily. In 1921, arrangements were made for the shipment of butter produced in the northern dairying districts; frozen meat also may be dispatched, and a wharf is available for timber. There are no special facilities for the export of wheat, the trade being centralised in Sydney.

Wharfage accommodation to the extent of 22,132 feet is provided; 10,138 feet are used for the shipment of coal, 6,855 feet for general cargo, 2,428 feet for Government purposes, and 2,711 feet are leased. There are 98 mooring dolphins and jetties for vessels awaiting cargo. The general cargo wharves are connected with the main railway system; the railway extends along the coal wharves also.

A proposal to constitute a harbour trust for Newcastle on terms similar to the Sydney Port Authority is being investigated.

#### *Other Ports.*

The shipping trade of the ports of New South Wales, other than Sydney and Newcastle, is relatively small, and only a brief description is given.

#### ERRATUM.

Page 138, Tonnage, Melbourne: for 9,669,927, read 5,608,013.

They provide fair shelter during off-shore winds, the depth of water at the ocean jetty being 19 feet. The estuaries of the Richmond and Clarence Rivers are bar harbours. On the Richmond River bar the average depth at low water is 12 feet, and the river is navigable by small vessels as far as Lismore, 65 miles from the sea. The bar at the entrance to the Clarence River is somewhat shallower, but vessels of 14 feet draught may navigate the river as far as Grafton (48 miles). Woolgoolga gives protection to small vessels in southerly weather. At Coff's Harbour breakwaters are under construction to form a harbour for the rich Dorriggo district by connecting small islands in the vicinity with the mainland; when complete, a harbour of 222 acres will be available, and 97 acres will give a minimum depth of 24 feet.

The bar harbours which form the estuaries of the Bellinger and Nambucca Rivers are used only by vessels of light draught. Trial Bay generally affords safe anchorage and shelter for coastal vessels; the Macleay River, which discharges into Trial Bay, is navigable by small vessels for 30 miles. Port Macquarie, at the mouth of the Hastings River, is a bar harbour for coastal vessels, but the entrance is rendered somewhat dangerous by shifting banks of sand. Between Port Macquarie and Port Stephens small vessels are

afforded shelter at Camden Haven, Crowdy Bay, Harrington Inlet (at the mouth of the Manning River), Cape Hawke Harbour (Point Forster), and Sugarloaf Bay.

Port Stephens is 21 nautical miles north of Newcastle; at the entrance the depth is 30 feet and the width between the headlands is about 60 chains, the navigable width being 20 chains. The port extends westward for about 11 miles and is from 1 to 3 miles broad; excluding the Karuah and Myall Rivers, which discharge into Port Stephens, the area enclosed by a coastline of 92 miles is about 32,000 acres. The eastern portion is somewhat obstructed by sandbanks, but there are channels between them giving access to secure landlocked anchorages. Salamander Bay, 5 miles from the entrance, is a spacious, well sheltered anchorage, with a depth ranging from 36 to 54 feet. Outside Port Stephens there is an anchorage known as Fly Road, where vessels can obtain excellent shelter in exceptionally heavy southerly weather, if they experience difficulty in entering the port. On account of its natural advantages, its proximity to the Maitland coal-fields, and its favourable position for connection with trunk railways, Port Stephens could be transformed into an important shipping centre.

Broken Bay, at the mouth of the Hawkesbury River, is also a good natural harbour, but on account of its proximity to Sydney Harbour it has not been developed. Broken Bay has three large branches, Brisbane Water, Hawkesbury Mouth and Pittwater; the area below the bridge where the main Northern railway crosses the Hawkesbury River, excluding Cowan, Mullet and Cockle Creeks, and Brisbane Water, extends over 14,500 acres and has a coastline of 62 miles. The entrance to Broken Bay is  $2\frac{1}{4}$  miles wide, with deep water; the Hawkesbury River is navigable for 70 miles; vessels of 9 feet draught may enter Brisbane Water; Pittwater is deep, but the entrance is blocked by a bar with a fairway depth of 9 feet.

To the south of Sydney lies Botany Bay, used mainly as a fishing ground and tourist resort. At the roadsteads Bulli and Bellambi, ocean jetties have been constructed for the shipment of coal. Wollongong has a small artificial shipping basin connected by rail with the Illawarra coal mines. A few miles further south a harbour for deep-sea vessels has been built at Port Kembla; the shipping area with a minimum depth of 24 feet is 256 acres, and there are 166 acres with 36 feet of water. Shellharbour is fit for small vessels only; at Kiama a small harbour is available for coastal steamers; at Crookhaven good anchorage may be obtained in 6 fathoms of water. Jervis Bay is 82 miles south of Sydney; its area is about 48 square miles and the entrance is about  $2\frac{1}{4}$  miles wide. About 38 square miles carry a depth over 24 feet, but only a small proportion of the area is suitable for anchorage in all weather, on account of the almost oval form of the bay and the few indentations in the coastline, which is only 31 miles in length. Darling Road and Montague Road are parts of the bay which afford shelter at all times; at Darling Road an area of land has been ceded to the Commonwealth Government as a port for Canberra, the Federal Capital.

Between Jervis and Twofold Bays there are a number of shipping places where small coastal steamers load dairy produce for the Sydney market, viz., Ulladulla, a small artificial harbour, Bateman Bay, Moruya River, Narooma (Wagonga Inlet), Bermagui, Tathra (the port of Bega), and Merimbula. Twofold Bay is near the southern extremity of the State; it affords good anchorage for fairly large vessels, but on account of the great width at the entrance, viz., 3 miles, and the comparatively small area of the bay, 7,580 acres, it would require extensive improvement to convert it into an efficient harbour.

## RIVER TRAFFIC.

New South Wales has few inland waterways and although there is some river traffic its extent is not recorded. The coastal rivers especially in the northern districts are navigable for some distance by sea-going vessels\* and trade is carried further inland by means of smaller steamers and launches.

The use of the inland rivers for navigation depends mainly on seasonal conditions and, normally, the Murray River may be used by flat bottomed barges and other small craft. Traffic on the Darling is intermittent; at certain times in seasons when the rainfall is sufficient to maintain a fair volume of water, barges carry wool and other products for a considerable distance. A scheme is in progress for the construction of storage dams, weirs and locks on the Murray, Murrumbidgee and Darling Rivers; it has been undertaken with the primary object of supplying water for the purposes of irrigation, but the weirs and locks are designed to provide for navigation at all times of the year by vessels drawing 5 feet of water.

## RATES OF FREIGHT.

Freight charges represent an important factor in the cost of marketing in overseas countries the products of the industries of New South Wales. Generally the rates charged by British lines of steamships are determined by organisations of shipowners; in regard to this matter, it is considered that the establishment of the Commonwealth Government Line has had the effect of stabilising rates, as the declared policy of the management is against increases unless current rates have proved unprofitable.

During the war period, rates of freight rose to an extraordinary level. The maximum for most commodities was reached in 1919; then the over-supply of shipping led to a general decline and the movement became steadily downward. The decrease is especially noticeable in regard to classes of cargo carried by tramp steamers, *e.g.*, wheat, for which freight was charged at £7 10s. per ton in 1920, and in the following year space was obtained at the rate of £2 7s. 6d. per ton; in 1921-22 there was a further decline.

The following statement shows the range of rates for the carriage of various commodities by steamer from Sydney to London in the last four years, as compared with the rates in 1913-14:—

Article.	1913-14.	1918-19.	1919-20.	1920-21.	1921-22.
Butter .. .. box 56 lb.	2s. to 2s. 6d.	5s. 3d. + 5% to 5s. 3d. to 5s. 4d.	6s.	6s.	6s. to 5s.
Copra .. .. .. ton	42s. 6d.	6s. 3d. 208s. to 277s. 6d.	+ 5% 208s. to 227s.	225s. to 120s.	120s. to 80s.
Hides .. .. .. lb.	50s. to 60s.†	1½d. to 2½d.	1½d.	1½d. to 1d.	1d. to ½d.
Leather .. .. .. ton	80s.	135s. to 360s.	135s. to 270s.	270s. to 244s.	244s. to 200s.
Mutton—Frozen .. .. lb.	½d. to 1½d.	1½d. to 1½d. + 5%	1½d. to 1½d. + 5%	1½d. + 5%	1½d. to 1½d. net.
Rabbits—Preserved .. ton	55s.	120s. to 167s. 6d. + 5%.	120s. to 167s. 6d. + 5%.	120s. to 105s.	105s. to 85s.
Tallow .. .. .. "	47s. 6d.	180s. to 240s.	180s.	180s. to 170s.	170s. to 130s.
Wheat .. .. .. "	25s. to 37s. 6d.	105s. to 160s.	120s. to 150s. less 5%.	120s. to 46s. 8d.	46s. 8d. to 36s.
Wool—Greasy .. .. lb.	¾d.	1½d. to 2½d.	1½d.	1½d.	1½d. to 1½d.
Measurement Goods—40 cub. ft.	40s. to 45s.	120s. to 160s.	120s.	120s. to 105s.	105s. to 95s.
Timber .. .. 100 sup. ft.	6s. 9d.	27s. 6d. to 35s.	35s.	35s. to 22s.	22s. to 15s.

A substantial decline occurred during the year ended June, 1922, but at the end of the season the rates were still much higher than in 1914. Wool was carried direct to Continental ports in Europe at the same rates as to London in 1921-22, and the rate from Sydney to Japan was 1½d. per lb., less 10 per cent. rebate.

\* See section relating to Geography.

† Per ton.

## SHIPPING REGISTERS.

Shipping in New South Wales is registered in accordance with the Merchant Shipping Act of the Imperial Parliament, under sections which apply to the United Kingdom and to all British dominions. The Act prescribes that all British vessels engaged in trade must be registered, except those under 15 tons burthen employed in the coasting trade of the part of the British Empire in which the owners reside. Ships not legally registered are not entitled to recognition as British ships and are not permitted to proceed to sea. Although the registration of vessels under 15 tons is not compulsory, many small vessels are registered at the request of the owners, as registration facilitates the transaction of business for the purpose of sale or mortgage. The flag for merchant ships registered in Australia is the red ensign usually flown by British merchant vessels, defaced with the seven-pointed star of the Commonwealth and the five smaller white stars representing the Southern Cross.

The ports in New South Wales at which shipping registers are kept are Sydney and Newcastle. The following statement shows particulars regarding the shipping on the Registers, as at 30th June, 1922 :—

Tonnage Class.	Steam.		Motor.		Sailing.		Total.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
Under 5 tons ...	259	6,089	194	2,086	207	2,871	660	11,046
50 and under 500 ...	202	30,948	4	305	77	12,118	283	43,371
500 „ „ 1,000 ...	17	11,848	...	...	9	7,351	26	19,199
1,000 „ „ 2,000 ...	27	44,187	...	...	3	3,479	30	47,666
2,000 and over ...	14	39,859	...	...	...	...	14	39,859
Total ...	519	132,931	198	2,391	296	25,819	1,013	161,141

Changes in respect of the registration in consequence of sales show that fifty-seven vessels, with an aggregate tonnage of 5,286 tons (net), were sold during the year 1921-22. As all were sold to British subjects, the transactions did not necessarily involve removal from the registers, as in the case of sales to foreigners. Six vessels were imported from the United Kingdom for local trade in New South Wales, their aggregate value being £259,000 ; three vessels, of a total value of £18,000, were exported, viz., two to New Zealand, including one built in Australia, and one to Fiji.

## SHIPBUILDING AND REPAIRING.

Accommodation for building, fitting, and repairing ships, has been provided by State and private enterprise at Sydney and Newcastle, and at four other ports in New South Wales.

In Sydney Harbour there are four large graving docks, five floating docks, and six patent slips. Two graving docks, the Fitzroy and the Sutherland, situated on Cockatoo Island, were under the control of the Government of New South Wales until February, 1913, when they were transferred to the Commonwealth. The Sutherland Dock is 633 feet long, and can accommodate a vessel with a breadth of 84 feet, and a draught of 30 feet. The Fitzroy Dock has an effective length of 490 feet, and its breadth is 45 feet ; it can take vessels drawing 18 feet 3 inches. At Cockatoo Island there are also two patent slips, where vessels drawing 9 feet and 4 feet respectively may be slipped. Ninety-seven vessels, including 45 warships, were docked at the Cockatoo Island docks during the year ended 30th June, 1922, their gross tonnage being 258,109 tons ; the vessels slipped numbered 39 with a tonnage



of 1,287 gross. A large number of vessels, including warships, have been constructed at Cockatoo Dockyard, and two vessels of 12,500 tons each are under construction there.

A private company, Mort's Dock and Engineering Company, Limited, owns two graving docks in Sydney Harbour, three floating docks and three patent slips. The Woolwich Dock is 850 feet long, and at high tide can take vessels drawing 28 feet; Mort's Dock is 640 feet long, and vessels drawing 16½ feet may be floated into it. The largest of the slips is 270 feet long; it can take a vessel weighing 1,500 tons, drawing 11 feet forward and 16 feet aft. The works of the Mort's Dock and Engineering Company are equipped with plant for shipbuilding, as well as for all classes of repairs.

There are two smaller docks, under private ownership, with a lifting power of 400 tons and 300 tons respectively, and the State Government maintains a slip with a lifting capacity of 100 tons.

At Newcastle there are two patent slips attached to the State Government Dockyard at Walsh Island, and three which are privately owned. Of the latter, the largest is 200 feet long and 40 feet wide; it can take vessels which weigh 800 tons, and draw 8 feet forward and 12 feet aft.

The works at Walsh Island were established on a site which was originally a sandspit, and had been built up by dredging from the bed of the Hunter River. In 1913, after the Cockatoo Dockyard had been transferred to the Federal Government, workshops were erected at Walsh Island for the construction and repair of Government dredges and other vessels; subsequently the establishment was extended, and provision was made for the construction of merchant ships and ferry steamers, and for other classes of engineering and iron work. Six steel cargo steamers, of over 5,500 tons deadweight capacity, were built for the Commonwealth Government, and a number of ferry steamers. The patent slips are 200 feet and 150 feet in length respectively, and they are 40 feet broad; one has a lifting power of 900 tons and the other 400 tons. During the year ended 30th June, 1922, fifty-nine dredges, tugs, punts, etc., belonging to the State, and nine other vessels, were docked at Walsh Island.

Graving docks under the control of the State Government are maintained at the ports of the Tweed, Richmond, Clarence and Macleay Rivers to meet the requirements of vessels engaged in the coastal trade. The largest, at Richmond River, is 214 feet long and 45 feet wide; it can accommodate a vessel with a draught of 10 feet. Thirty vessels with a gross tonnage of 1,938 tons were docked at these ports during the year 1921-22.

The number and tonnage of steam and sailing vessels built in New South Wales are shown in the following statement for the period 1906-1922:—

Years.	Sailing.		Steam.		Motor.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
1906-1915	21	931	126	7,709	24	361	170	9,094
1916	2	184	8	355	6	146	16	685
1917	4	365	5	8,032	8	104	17	8,501
1917-18	2	300	6	4,132	5	380	13	4,812
1918-19	1	256	9	4,085	4	226	14	4,567
1919-20	2	248	22	31,105	14	487	38	31,840
1920-21	1	7	8	808	6	84	15	899
1921-22	4	37	10	6,619	10	82	24	6,738

Seven steamers built in 1921-22 were made of steel, and the other vessels were of wood. As a result of war conditions, shipbuilding in New South Wales, as in other countries, experienced a short period of remarkable activity, which led to over-production and a consequent depression in the industry.

#### COMMONWEALTH GOVERNMENT SHIPPING AND SHIPBUILDING.

For the purpose of providing for the transportation to oversea markets of the Australian produce which had accumulated as a result of the disorganisation of shipping due to the war, the Commonwealth Government Line of Steamers was inaugurated in July, 1916, by the purchase of a fleet of 15 cargo steamers with a carrying capacity of about 106,000 tons. The price was £2,052,654; three sailing vessels also were bought for a sum of £81,494; and 18 ex-enemy ships were placed under the management of the line.

The world-wide shortage of shipping became more acute during the year 1917, and the Commonwealth Government considered it advisable to place orders for the construction of additional tonnage in oversea shipyards and to encourage the development of the shipbuilding industry in Australia. Orders were placed in America for the construction of 14 wooden cargo vessels; in Australia arrangements were made for building 21 steel cargo steamers and 24 wooden sailing vessels, of which 8 steamers and 18 sailers were to be built in New South Wales.

After the signing of the armistice in November, 1918, it was found that the new tonnage completed and under construction throughout the world was in excess of requirements, especially in respect of cargo vessels; therefore the Government modified its plans. The wooden vessels built in America, viz., 5 steamers and 9 motor ships, were sold to American buyers in 1919, a loss of over two millions sterling being incurred. Owing to the default of a purchasing firm, 5 steamers reverted to the Government and were sold in Australia in August, 1922. Prior to sale, 10 of the vessels had been engaged in oversea trade under the control of the Commonwealth Government Line of Steamers as managing agents, but the ships did not form part of the Commonwealth fleet. The contracts for the construction of wooden vessels in Australia were cancelled, with the exception of those for two vessels, which the Government refused subsequently to accept as they were not built in conformity with the contract agreement. Of the steel steamers, 13 have been completed and placed in commission, and 8 are under construction.

In addition to the fleet of cargo carriers, 5 steamers were built in Great Britain for a passenger and cargo service between Australia and the United Kingdom; insulated space is provided, and the passenger accommodation is designed to meet the requirements of the assisted immigration scheme. The steamers bear the names of Australian bays, and are known as the "Bay" steamers; they have a displacement of 25,900 tons, and a tonnage of 13,850 gross, or 8,447 net; provision is made for over 700 third-class and a limited number of first-class passengers. The service was commenced in December, 1921, and the vessels sail at monthly intervals from Sydney, *via* Suez, making the voyage to London in 37 days.

The number of vessels under the management of the Commonwealth Line, as at 30th June, 1922, was 44, including 17 ex-enemy steamers. The aggregate deadweight capacity was 323,385 tons, and the cargo space included 1,432,840 cubic feet, which were insulated.

#### SEAMEN.

Matters relating to the employment of seamen are subject to control by the Commonwealth Government in terms of the Federal Navigation Act.

Provision is made for the regulation of the methods of engagement and discharge, the form of agreement, rating, the ship's complement, discipline, health, and accommodation. Mercantile Marine offices were established in March, 1922, to undertake functions performed hitherto by State shipping offices at Sydney and Newcastle, where engagements and discharges are registered.

The following statement shows the number of transactions at the offices during the last five years:—

Year ended 30th June.	Engagements registered.			Discharges registered.			Licenses to ship.		
	Sydney.	New-castle.	Total.	Sydney.	New-castle.	Total.	Sydney.	New-castle.	Total.
1918	26,002	4,109	30,111	25,407	3,332	28,739	2,839	605	3,444
1919	21,199	3,120	24,319	24,208	2,908	27,116	1,605	358	1,963
1920	23,305	3,307	26,612	21,503	2,479	23,982	1,694	459	2,153
1921	24,684	4,917	29,601	24,212	4,410	28,622	1,344	439	1,783
1922	23,855	4,912	28,767	23,896	3,556	27,452	925	152	1,077

During the year 1921-22 the number of seamen reported as deserters from British vessels trading on foreign voyages was 168, viz., 91 at Sydney and 77 at Newcastle.

The rates of wages, hours of labour, and conditions under which seamen work on vessels engaged in the interstate and coastal trade of Australia are fixed by awards and agreements under the Commonwealth Conciliation and Arbitration Act. The rates for seamen are based on a labourer's basic wage\* and an additional sum of £2 per month for skill.

The monthly rates ruling in February, 1923, were as follows:—

Occupation.	Interstate.		Coastal.	
	£ s.	£ s.	£ s.	£ s.
Officers—Chief ... ..	20 10	to 31 10	20 10	to 26 10
Second ... ..	18 10	„ 28 10	18 10	„ 23 10
Third ... ..	19 10	„ 25 10	18 10	„ 23 10
Junior ... ..	£18 10s.		.....	
Engineers—Chief ... ..	30 10	to 51 0	} 19 0	to 42 0
Second ... ..	25 0	„ 33 0		
Third ... ..	23 10	„ 27 10		
Fourth ... ..	19 10	„ 24 10		
Firemen ... ..	£17 11s. 6d.		£17 11s. 6d.	
Trimmers ... ..	£15 11s. 6d.		£15 11s. 6d.	
Seamen—Steamers ... ..	£15 11s. 6d.		£15 11s. 6d.	
Cooks ... ..	13 6	to 21 16	13 6	„ 20 6
Stewards ... ..	15 6	„ 17 16	15 6	„ 17 16
Stewardesses ... ..	10 12	„ 11 15	10 12	„ 11 15

Except where provided specifically in the awards and agreements, the ordinary hours of work for seamen are eight per day, and overtime must be paid for time worked in excess of eight hours. Manning conditions are regulated by committees representing the shipowners and the seamen's unions.

Compensation to seamen is provided by the Seamen's Compensation Act, 1911, which applies to ships in the service of the Commonwealth (exclusive of naval or military service), and to ships trading with Australia, or engaged in any occupation in Australian waters, or in trade and commerce with other countries or among the States. The schedules of the Act indicate the amount

\* See Section relating to Wages in Part Employment and Production.

of compensation payable, in case of death or total or partial incapacity, resulting from personal injury by accident to seamen in the course of their employment. Methods of procedure for the recovery of compensation are indicated in regulations under the Act.

#### SAFETY OF LIFE AT SEA.

The navigation laws contain stringent provisions designed to prevent unseaworthy ships from proceeding to sea, and to ensure that all vessels are manned by competent crews, that life-saving appliances are carried, and that special arrangements are made to safeguard dangerous cargoes; and regulations have been framed for the prevention of collisions, also rules regarding the lights and signals to be used.

On account of the regularity of the coast of New South Wales and the absence of islands, navigation in the seaboard waters is usually safe. Along a coastline less than 700 miles in length there are 28 light-houses, and in the ports of Sydney, Newcastle, Port Kembla, and in many other shipping places, lighted beacons, leading lights, and other guides have been placed for the safety of harbour navigation.

The lights on the sea coast are under the control of the Commonwealth, and a description of the more important light-houses was published in the 1921 issue of this Year Book at page 274.

Pilotage is a State service as it has not yet been transferred to Federal authority. A pilot must be engaged for every vessel entering or leaving a port of New South Wales unless the master holds a certificate of exemption. Such certificates may be granted to British subjects only, for use in respect of British ships registered in Australia or New Zealand and employed in the trade between ports in Australasia and the South Sea Islands, or engaged in whaling.

Wrecks and shipping casualties which occur to British merchant shipping on the coast of New South Wales are investigated by Courts of Marine Inquiry.\* The majority of wrecks reported are small coasters under 200 tons. The following statement shows the wrecks reported in each of the last five years; the figures do not include vessels which left the ports of New South Wales and were recorded as missing:—

Year ended 30th June.	British Vessels.				Total Tonnage.	Crews and Passen- gers.	Lives Lost.
	Steam.	Motor.	Sailing.	Total.			
1918	4	...	...	4	7,522	298	4
1919	5	...	1	6	1,214	64	30
1920	4	1	...	5	775	109	7
1921	6	...	1	7	1,475	133	36
1922	1	...	1	2	200	16	...

Lifeboat stations are maintained at Sydney and at Newcastle, and life-saving appliances are kept at certain places along the coast. The pilot boats are fitted for rescue work, and steam tugs are subsidised for assisting vessels in distress.

The Royal Shipwreck Relief and Humane Society of New South Wales affords relief to distressed seamen and their dependents and to the crews and necessitous passengers wrecked in New South Wales waters. It is maintained by public subscription, without subsidy from the State; the relief given in the year ended June, 1922, amounted to £1,052.

\* See Part relating to Law Courts.

## EDUCATION.

IN New South Wales the State has established a system of National Education which embraces all branches of primary, secondary, and technical education, and it contributes considerable sums towards the maintenance of the University of Sydney. In addition to the State schools, there are numerous private educational institutions subject to State inspection, of which the majority is conducted under the auspices of the religious denominations.

### *Development of the present School System.*

The first school in New South Wales was established in 1792 by the Society for the Propagation of the Gospel in Foreign Parts. But, as late as 1845, a committee of inquiry reported that more than one-half of the children of New South Wales (then including Victoria and Queensland) were receiving no education at all.

Until the year 1848, education in New South Wales was conducted mainly by the religious denominations, with monetary assistance from the Government. But in that year an undenominational scheme of education, or the National system, as it was called, was introduced and conducted side by side with the denominational schools, each group of schools being placed under a separate board. The existence of these two boards continued until 1867, when the Public Schools Act provided for the continuance of the two classes of schools, but placed all schools receiving aid from the State under the control of the Council of Education, a board appointed by the Government. In practice the public schools were administered entirely by this board, and the denominational schools were governed partly by the Council and partly by the various religious bodies by which they were founded. From this dual control, transition was made to the present centralised system by the Public Instruction Act, 1880, which abolished all State aid to denominational education, thus removing the private schools from State supervision. This Act, as amended by the Free Education Act, 1906, the Bursary Endowment Act, 1912, and the Public Instruction (Amendment) Act of 1916 and 1917, is the statutory basis of the present education system of New South Wales.

Denominational and other private schools continue in existence without endowment, but by virtue of the compulsory education principles of the Act of 1916, and of the conditions attaching to bursary awards for secondary and tertiary education, all primary schools, and most secondary schools, became subject to a measure of inspection by officers of the State, and were required to conform to the standards prescribed by the Government. In December quarter, 1921, approximately 82 per cent. of the children between 7 and 14 years of age attended State schools, and 18 per cent. attended private schools.

### PRESENT SCHOOL SYSTEM.

The principles of the present State or Public School system were originated by the Education Act, 1880, which is still in force, but since 1899 the growth of new educational ideals has lead to extensive changes through endeavours "to construct a flexible, coherent, and comprehensive national system which should correspond with the economic and political ideals of the people." Corresponding changes have been wrought in the

nature of school work, and in the Primary Syllabus of 1922 the aim of the system was thus stated: "The function of a school is to supply the circumstances and conditions most favourable to a child's growth." No particular method of teaching is imposed, and emphasis is laid upon the acquisition of personal culture and the development of intelligence as well as on the assimilation of useful knowledge.

Education under this system is secular, free and compulsory, each of these principles being enjoined by statute. The Act of 1880 provides that "the teaching shall be strictly non-sectarian, but the words "secular instruction" shall be held to include general religious teaching as distinguished from dogmatical or polemical theology"; general religious instruction is given by teachers, and for limited periods, with the consent of parents, by ministers of religion. The Free Education Act, 1906, provided that all education in State primary schools must be free; fees in secondary schools were abolished by regulation in 1911, and were not reimposed until 1923. The Act of 1880 provided that attendance of children at school be compulsory between the ages of 6 and 14 years, but the Amending Act of 1916 raised the compulsory age at beginning to 7 years.

The State School system is subject to central guidance and control, being administered by a responsible Minister of the Crown, through the Director of Education, who is Under-Secretary of the Department of Education. Practically the whole of the expenditure on State education is provided by appropriation from the Consolidated Revenue Fund.

The complete scheme of education, as established, insures co-ordination between both public and private schools, and provides a direct avenue from Kindergarten to University. The various stages are marked by examinations designed to test the fitness of candidates for higher education. Assistance to obtain secondary and tertiary education is accorded by the State through the bursary system to promising students who lack financial means.

#### PERSONS RECEIVING EDUCATION.

A measure of the progress of education in the State during the twenty years, 1901 to 1921, is available from the results of the censuses, and these supply a test of the effects of educational policy. Between 1901 and 1911 there was a strong movement to secure reform of the system, but beyond the abolition of school fees, little actual change was made. During the period 1911 to 1921 there occurred a rapid extension of secondary education, increased regulation of private education, and more stringent enforcement of the compulsory attendance provisions of the Education Act.

As a result of these and perhaps other causes, higher education became more popular. Whereas the proportion of the population receiving education decreased from 21.6 per cent. in 1901 to 17.4 per cent. in 1911, it rose to 19.8 per cent. in 1921 (excluding from account pupils of technical schools). These proportions are not, however, a correct reflex of educational changes, as they depend largely upon the variations in the proportion to the total population of children at the most usual years of school attendance, viz., from 5 to 14 years of age. The proportions at these ages in the population were 24.2 per cent. in 1901, 19.7 per cent. in 1911, and 20.9 per cent. in 1921. If these be used as a standard by which to measure the relative diffusion of education, it is apparent that the decrease between 1901 and 1911 in the proportion of persons receiving education was almost exactly equal to the decrease in the proportion of children of school age, indicating that no effective extension of educational activities occurred. But in 1921 the proportion per cent. of the population receiving instruction had risen by 2.4

since 1911, which, compared with the increase of 1·2 in the proportion of children of school age to the total population, indicates a pronounced extension of adolescent and adult education.

The number of persons receiving instruction at the date of each census was distributed as follows :—

Receiving Instruction at—	1901.			1911.			1921.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
State School .....	103,371	91,643	193,019	107,017	98,754	205,769	150,561	140,804	291,365
Private School .....	31,662	38,185	69,847	26,975	32,228	59,203	35,199	42,354	77,553
Home .....	7,561	8,959	16,520	4,617	5,530	10,147	6,081	7,100	13,181
University .....	260	50	310	762	171	933	2,122	812	2,934
School not stated .....	4,078	4,279	8,357	4,792	5,111	9,903	17,101	16,478	33,574
<b>Total .....</b>	<b>146,932</b>	<b>146,121</b>	<b>293,053</b>	<b>144,161</b>	<b>141,794</b>	<b>285,955</b>	<b>211,061</b>	<b>207,543</b>	<b>418,607</b>
Proportion per cent. of population receiving instruction.	20·63	22·66	21·62	16·81	17·97	17·37	19·71	20·17	19·81

The variations in the number of persons recorded as receiving instruction are explained above.

The proportion of persons receiving instruction in their own homes was comparatively small—about 3 per cent. of the total in 1921. The decrease between 1901 and 1921 is attributable to the institution of subsidised schools, and the increase in home education subsequent to 1911 was proportionally less than the increase in school education. The great expansion of tertiary education is evident in the three-fold increase in the number of University students, the increase in women students being nearly five-fold. In addition, the numbers of technical scholars in 1921 was 6,512 males and 2,394 females.

#### EDUCATION OF THE POPULATION.

The extent to which the rudiments of education—reading and writing—have been acquired by the population is shown in the following table :—

Particulars.	1901.			1911.			1921.		
	Males	Females	Total.	Males	Females.	Total.	Males.	Females.	Total.
Cannot Read—									
Under 5 years of age..	80,318	78,564	158,882	102,003	93,863	200,866	121,529	117,311	239,340
Over 5 years of age ..	52,834	41,466	94,300	32,212	24,945	57,157	51,302	41,556	92,858
English Language—									
Read and write .....	554,374	509,100	1,063,474	696,258	645,022	1,341,280	875,514	849,312	1,725,326
Read only .....	14,288	15,110	29,398	2,565	3,140	5,705	2,676	2,615	5,291
Foreign Language only—									
Read and write .....	7,912	153	8,465	5,839	650	6,539	3,595	595	4,190
Read only .....	279	48	327	497	61	558	218	78	296
Not Stated .....	*	*	*	18,274	16,355	34,629	16,667	16,403	33,070
<b>Grand total .....</b>	<b>710,005</b>	<b>644,841</b>	<b>1,354,846</b>	<b>857,698</b>	<b>789,936</b>	<b>1,646,734</b>	<b>1,071,501</b>	<b>1,028,870</b>	<b>2,100,371</b>

\* Distributed.

Most of the persons over 5 years of age who could not read were probably young children whose education had not advanced to that stage. There were approximately 74,000 children in or about to enter the kindergarten and first classes of public schools at the census of 1921, and these were probably about four-fifths of the number so situated in all schools.

The proportionate numbers in the various groups of whom particulars were obtained are shown below :—

Particulars.	1901.			1911.			1921.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Cannot read—									
Under 5 years of age .....	11.31	12.19	11.72	12.15	12.80	12.46	11.52	11.64	11.58
Over 5 years of age .....	7.44	6.43	6.96	3.84	3.23	3.55	4.87	4.10	4.49
English language—									
Read and write .....	78.38	78.95	78.50	82.94	83.48	83.20	83.00	83.94	83.46
Read only .....	2.01	2.34	2.17	.31	.41	.35	.25	.26	.26
Foreign language only									
Read and write .....	1.12	.00	.63	.70	.03	.41	.34	.06	.20
Read only .....	.64	.00	.02	.06	.00	.03	.02	.00	.01
Grand total .....	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The proportion of the illiterate over 5 years of age increased from 3.55 per cent. in 1911 to 4.49 per cent. in 1921, attributable largely perhaps to the raising of the age of compulsory attendance at school from 6 to 7 years in 1916.

The number of persons whose ability to read and write was confined to a foreign language was small, and it decreased greatly throughout the period. The accuracy of the results in the preceding table is prejudiced by the number of cases in which particulars are not stated.

#### SCHOOLS AND TEACHING STAFFS.

The following table shows the total number of public and private schools in operation at the end of 1901, 1911, and of each of the past five years, and the aggregate teaching staff in each group. The figures in this table, and in the subsequent tables relating to public and private schools include secondary schools, but are exclusive of the Technical Colleges and Trade Schools, Free Kindergarten and other schools maintained by charitable organisations, shorthand and business colleges, etc.

Year.	Schools.			Teaching Staffs.						
	Public.	Private.	Total.	In Public Schools.			In Private Schools.			Grand Total.
				Men.	Women.	Total.	Men.	Women.	Total.	
1901	2,745	890	3,635	2,857	2,355	5,212	602	2,776	3,378	8,590
1911	3,125	757	3,882	3,309	3,208	6,517	704	2,981	3,685	10,202
1917	3,221	660	3,881	3,698	5,061	8,759	681	3,054	3,735	12,494
1918	3,152	699	3,851	3,677	5,345	9,022	795	3,040	3,835	12,857
1919	3,124	678	3,802	3,636	5,366	9,002	750	3,094	3,844	12,846
1920	3,163	679	3,842	3,707	5,497	9,204	749	3,061	3,810	13,014
1921	3,216	677	3,893	3,885	5,709	9,594	803	3,256	4,069	13,663

The number of teachers shown above includes, in the case of public schools, students in training, who numbered 331 males and 591 females in 1921, and in the case of private schools, visiting or part-time teachers, who numbered 338 males and 803 females, some of whom doubtless attended more than one school and appear in more than one return.

In the State schools the men employed as teachers outnumbered the women until 1912, but the proportion of men in 1921 was only 40 per cent.



of the total. In the private schools the proportion of men teachers has been small always, but it is increasing. Men constituted only 20 per cent. of the teaching staff of private schools in 1921.

#### SCHOOL PUPILS.

A comparative review of the enrolment of children at public and private schools is restricted to the last quarter in each year, as the figures formerly collected in regard to private schools relate only to that period. The following statement shows the recorded enrolment during the December quarter at all schools and colleges in the State, primary and secondary, other than technical, trade, kindergarten, and business schools and colleges :—

Year.	Public Schools.		Private Schools.		Total Enrolment.	Proportion of Scholars Enrolled.	
	Boys.	Girls.	Boys.	Girls.		Public Schools.	Private Schools.
						per cent.	per cent.
1901	110,971	99,617	27,163	33,674	271,425	77·6	22·4
1911	116,317	105,493	26,962	34,588	283,360	78·3	21·7
1917	144,808	133,066	30,427	38,699	317,000	80·1	19·9
1918	146,136	134,100	33,829	40,363	354,428	79·1	20·9
1919	150,465	138,466	34,267	40,669	363,867	79·4	20·6
1920	156,066	143,625	34,254	40,085	374,030	80·1	19·9
1921	163,698	151,529	35,903	42,557	393,688	80·1	19·9

Since 1901 the enrolment in public schools has increased by 50 per cent. while in the private schools it has risen by only 29 per cent., so that the proportion of children in public schools has advanced from 77·6 per cent. to 80·1 per cent. In the public schools there are more boys than girls, the proportions being boys 52 per cent., and girls 48 per cent.; in the private schools girls are in the majority, representing 54 per cent. of the enrolment.

Considering only children, for whom education is compulsory, the following table shows the proportions taught in public and private schools, based on the enrolment in December quarter :—

Year.	Public Schools.	Private Schools.	Total.	Proportion per cent.	
				Public Schools.	Private Schools.
1911*	192,740	46,346	239,086	80·6	19·4
1916*	232,408	52,568	284,976	81·6	18·4
1917†	218,995	45,628	264,623	82·7	17·3
1921†	246,136	53,664	299,800	82·1	17·9

\* Children over 6 and under 14 years of age.

† Children over 7 and under 14 years of age.

Apparently the proportion of children of statutory ages attending private schools decreased between 1911 and the introduction of provision for enforcing compulsory attendance in 1916, and increased thereafter.

#### *Movement of School Population.*

A very considerable movement of pupils from one school to another occurs during the year, and this is occasioned only to a small extent by transfers from primary to secondary schools, which occur usually at the beginning of the year. The total number of dual enrolments effected in 1921 was 75,601,

of which 54,931 were due to pupils transferring from one public school to another; 7,983 from one private school to another; 7,737 from private to public schools, and 4,947 from public to private schools. The total movement of school population during the year was 18·1 per cent. of the individual enrolments. This is slightly less than the proportional movement of electors, which was 19·9 per cent. of the number enrolled.

#### CHILDREN RECEIVING EDUCATION.

The total number of individual pupils who received instruction in schools in New South Wales at any time during 1921 was 416,509, and of these 337,247 were last enrolled at public schools and 79,262 at private schools.

From the approximate results of tests made it is apparent that a considerable proportion of children between the ages of 7 and 13 years, when attendance is compulsory, are not enrolled in schools for the whole of those years, although they may be attending school for most of the statutory period. The children not enrolled in schools include those receiving instruction at home, those exempt from further attendance for special reasons, on attaining the prescribed standard at 13 years of age, and those who are inaccessible to schools or who are mentally or physically deficient. The institution of teaching isolated pupils by correspondence, the provision of conveyance facilities, and of subsidies for private teachers of small rural schools are now doing much to reduce the number of children not reached by the education system. In this connection it is interesting to note that of the persons married in New South Wales in 1921, nearly two and a half per cent. could not sign their names.

An interesting test of the efficacy of the enrolment system during the three years 1919-1921 is provided in the following table, which indicates the proportion of the effective enrolment each year to the estimated number of children "requiring education":—

Year	Estimated Number of Children of School Age at Middle of Year.	Children of Other Ages Enrolled (December Quarter).	Estimated Number of Children requiring Education.	Average Weekly Enrolment during Year.	Proportional Effective Enrolment.
1919	284,800	85,593	370,393	326,629	per cent. 88·2
1920	297,300	87,027	384,327	352,044	91·6
1921	309,000	93,888	402,888	366,470	90·9

Omitting the year 1919 when the effective enrolment was unusually low on account of an epidemic of influenza, it is apparent that the effective enrolment in schools is approximately only 91 per cent. of the standard used to gauge the number of children "requiring education." This comparison, however, is vitiated by the fact that the "number of children of other ages" included in it is a gross enrolment, and therefore is in excess of the number of children of those ages requiring education.

A less comprehensive, though more accurate, test of the provisions for compulsory attendance is obtained by considering the average number of pupils present each day in relation to the average number enrolled each week, pupils being omitted from the roll as they leave school. The

following comparison is made on this principle, secondary schools being included:—

Year.	Public Schools.			Private Schools.		
	Average Weekly Enrolment.	Average Daily Attendance.	Ratio of Attendance to Enrolment.	Average Weekly Enrolment.	Average Daily Attendance.	Ratio of Attendance to Enrolment.
1911	203,335	160,776	per cent. 79.0	*	52,122	per cent. *
1916	246,572	200,635	81.3	*	56,880	*
1917	258,713	221,940	85.8	*	53,012	*
1918	265,756	223,790	84.9	*	59,984	*
1919	261,778	212,873	81.3	64,831	53,937	83.2
1920	279,944	234,657	83.8	72,103	59,495	82.5
1921	292,264	248,605	85.1	74,206	64,172	86.4

\* Not available.

The marked improvement in attendance in public schools during 1917 is due to the operation of the amended law relating to school attendance, and the decline during 1919 was an effect of the epidemic of influenza in that year. A marked improvement in attendance was apparent in all schools in 1921, but the low proportion signifies that on the average children attend less than four and a half days in a school week of five days.

The attendance of children at school is affected adversely by the considerable amount of infectious and contagious diseases among children, and—particularly in country districts where transport facilities are lacking—by inclement weather.

#### *Age Distribution of Pupils.*

The following table shows the age distribution of pupils enrolled at schools since the age of compulsory attendance was altered. The figures represent the gross enrolment during December quarter at primary and secondary schools, but are exclusive of evening continuation schools and charitable schools:—

Year.	Public Schools.				Private Schools.			
	Under 7 years.	7 years and under 14.	14 years and over.	Total.	Under 7 years.	7 years and under 14.	14 years and over.	Total.
1917	37,218	218,995	21,661	277,874	13,755	45,628	9,743	69,126
1918	35,641	222,370	22,225	280,236	13,182	49,186	11,824	74,192
1919	37,935	227,535	23,461	288,931	13,195	50,739	11,002	74,936
1920	39,319	235,611	24,761	299,691	12,137	51,392	10,810	74,339
1921	41,938	246,136	27,154	315,228	12,622	53,664	12,174	78,460

In 1921 there were enrolled 54,560 children below the statutory school age—27,555 boys and 27,005 girls; and 39,328 pupils were over 14 years of age—19,621 boys and 19,707 girls.

More detailed information as to the ages of children attending public schools may be obtained from a table published annually in the report of the Director of Education. That table shows also the ages of children in the

various school classes, and, considered in conjunction with the primary and secondary school syllabuses, affords an excellent means of gauging the educational progress of school children as a whole.

### RELIGIONS.

A comparative view of the aggregate enrolment in primary and secondary schools (public and private) during the December quarter of various years is given below, and the figures, being on the same planes of comparison for each year, may be accepted as illustrative of the progression of each type of school during the period:—

Year.	Public Schools— Denomination of Children.					Private Schools— Denomination of Schools.			Total Enrolment all Schools.
	Church of England.	Roman Catholic.	Presby- terian.	Methodist.	Other.	Church of England.	Roman Catholic.	Other.	
1901	109,876	31,054	23,511	24,971	21,176	3,966	41,486	15,385	271,425
1911	118,794	31,044	26,347	30,595	15,630	3,297	46,097	12,156	283,360
1917	151,866	34,438	33,091	39,795	18,684	3,841	55,337	9,948	347,000
1918	153,993	33,274	33,428	40,324	19,217	4,320	59,136	10,736	354,428
1919	159,876	33,607	34,165	41,514	19,769	4,715	60,271	9,950	363,867
1920	166,733	34,500	35,491	42,776	20,191	4,749	60,196	9,394	374,030
1921	176,998	35,532	37,497	44,210	20,991	5,265	63,060	10,135	393,688

### *Per Cent. of Total Enrolment.*

1901	40.5	11.4	8.7	9.2	7.8	1.5	15.3	5.6	100
1911	41.9	10.9	9.3	10.8	5.3	1.2	16.3	4.3	100
1917	43.8	9.9	9.5	11.5	5.4	1.1	15.9	2.9	100
1918	43.4	9.4	9.5	11.4	5.4	1.2	16.7	3.0	100
1919	43.9	9.3	9.4	11.4	5.4	1.3	16.6	2.7	100
1920	44.6	9.2	9.5	11.4	5.4	1.3	16.1	2.5	100
1921	45.0	9.0	9.5	11.2	5.3	1.4	16.0	2.6	100

It will be noticed that in the public school figures the column headings indicate the denomination of the children, and in the private school figures the denomination of the schools. In the former case the denomination of the child is ascertained, but not in the latter; and the pupil, although attending a school of stated denomination, is not necessarily of that denomination.

The pupils attending Roman Catholic schools constitute 80 per cent. of the pupils attending private schools and 16 per cent. of the total pupils at all schools. The proportion of children of each denomination, except Roman Catholic, attending public schools has tended to increase or has remained constant. Although the proportion per cent. of Roman Catholic children enrolled in State schools declined from 10.9 to 9.0 per cent. between 1911 and 1921, the proportion of children enrolled in Roman Catholic schools also declined from 16.3 to 16.0 per cent. of the total. This decline is coincident with a decrease in the proportion of persons of the Roman Catholic faith in the population, and the increase in the proportion of children belonging to the Church of England is coincident with an increase in the proportion of persons professing that faith.

### *Religious Instruction in State Schools.*

The Public Instruction Act, 1880, provides that religious instruction may be given in State schools by visiting ministers and teachers of religious bodies for a maximum period of one hour in each school day, and the following table

indicates the number of lessons in special religious instruction given in primary schools during the past five years:—

Denomination.	Number of Lessons.				
	1917.	1918.	1919.	1920.	1921.
Church of England ... ..	34,349	35,098	28,444	31,363	40,530
Roman Catholic ... ..	1,584	1,370	1,167	1,477	1,696
Presbyterian ... ..	8,411	9,122	7,626	9,005	12,684
Methodist ... ..	13,368	13,865	11,472	13,594	17,314
Other Denominations ... ..	7,334	8,260	5,893	7,518	8,605
Total ... ..	65,046	67,715	54,602	65,957	80,829

#### SCHOOL EXAMINATIONS.

Formerly, public examinations were conducted by the University for the purpose of testing the educational fitness of intending students and of candidates for matriculation. The standards of these examinations became generally accepted by public bodies. With the reorganisation of the whole scheme of secondary education in 1911, which brought about a co-ordination of curricula between public and private schools and established secondary schools as a connecting link between primary school and University, it became necessary to establish a system of examinations with a wider purpose. A new scheme was formulated by the Department of Education with the concurrence of the University authorities, who agreed to accept as evidence of satisfactory educational qualification appropriate certificates issued by the Department, and, in 1916, the University discontinued holding further public examinations, with the exception of an annual special matriculation examination, on the results of which a number of University scholarships and prizes are awarded.

The regulations of the Department provide for the issue of four certificates to mark definite stages in the progress of school pupils. The Qualifying Certificate indicates that the holder has completed the primary course satisfactorily, and is fitted to enter upon a continuation course; but a special written examination is now held, and determines fitness for admission to High Schools. The Superior Public School Certificate is issued to successful candidates at a written examination terminating the continuation course of instruction. The Intermediate Certificate marks the satisfactory completion of the first three years of the secondary course. The Leaving Certificate is obtainable on graduation from the full five-years' secondary course, and is accepted as indicative of adequate preparation for the University, if it shows a pass in matriculation subjects.

Particulars of the number of candidates who sat for the various examinations each year are published in previous issues of this Year Book.

The first examination for the Qualifying Certificate was held in December, 1911. There were 34,155 candidates in 1921, of whom 24,000, or 70·3 per cent., were successful.

The first examination for Superior Public School Certificates was held in December, 1914. In 1921 the candidates numbered 2,086, and the passes 1,653, viz.:—Commercial, 369 candidates and 175 passes; Junior Technical, 577 candidates and 444 passes; Domestic, 866 candidates and 827 passes. The certificate gained in the Commercial Continuation Schools, where a three-years' course was initiated in 1918, is the Intermediate Certificate.

The Examining Board in connection with the Intermediate and Leaving Certificates consists of the Director of Education, the Chief Inspector, the Principal of the Teachers' College, the Inspector of Secondary Schools and four delegates appointed by the University.

Examinations for the Intermediate Certificate were commenced in November, 1912. During 1921 the number of candidates at this examination was 4,250, of whom 2,761, or 64·4 per cent., passed. Of these the number of candidates from State Schools, including those from the Commercial Continuation Schools, was 2,598, and the number of passes was 1,753, or 67·9 per cent. From private schools there were 2,057 candidates and 1,191 passes, or 57·9 per cent.

The first Leaving Certificate Examination was held in November, 1913. On the results of this examination, University bursaries, the exhibitions instituted under the University Amendment Act, and scholarships for the Diploma Courses at the Technical College, are awarded. In 1921 the number of candidates was 1,228, of whom 869, or 70·7 per cent., secured passes. There were 600 candidates from State Schools, and the passes, numbering 476, represented 79·3 per cent. From private schools there were 628 candidates; 393, or 62·6 per cent., being successful.

The Intermediate and Leaving Certificate Examinations have been adopted as standards for the admission of persons to the various branches of the public service of the State, and are accepted widely in commercial circles.

Certificates of proficiency are awarded to pupils of Evening Continuation Schools whose attendance and work have been satisfactory throughout the course. In 1921 there were 469 candidates at the examination for certificates, and 375 passed; in the previous year 340 passed out of 376 candidates.

#### SCHOLARSHIPS AND BURSARIES.

It is the policy of the State to assist promising students to obtain secondary and tertiary education by granting scholarships and bursaries to meritorious pupils whose parents have small means.

Scholarships tenable at State schools, which were awarded formerly on the results of the Qualifying Certificate examination, were discontinued in 1915, when arrangements were made for the free supply of school material; a few limited scholarships are provided to enable pupils to attend the Sydney Grammar School.

Scholarships are awarded annually on the result of the Intermediate Certificate examination to students of the Agricultural High School, entitling the holders to free education for two years at the Hawkesbury Agricultural College, with monetary allowance and text-books. The holders commence on the second year's course at the College.

Boys who intend to become teachers may gain at the Intermediate Certificate examination two-year scholarships tenable at District or High Schools. Text-books are supplied, and an allowance is granted.

Scholarships, admitting to courses of technical instruction, are provided to assist students to pass from the Day and Evening Junior Technical Schools to the Trades and Domestic Science Schools, from Lower to Higher Trades Courses, and from Trades to Diploma Courses. Students holding Leaving Certificates may obtain entrance by Scholarship to the Diploma Courses; and those who have gained the Intermediate Certificate at the Technical High School may obtain scholarships enabling them to enter the

**Higher Trades Courses.** These technical scholarships carry a grant of text-books and appliances and exemption from fees, and holders must be engaged in the trade or profession for which the course has been established.

Students who pass through the Diploma Course with sufficient distinction are enabled to continue their education at the University by means of scholarships valued at £100 per annum.

#### *Bursary Endowment.*

In 1912 the Bursary Endowment Act was passed by Parliament, providing public moneys for bursaries, tenable in public or private secondary schools and in the University of Sydney. This fund is administered by a specially constituted board, consisting of two representatives each of the University of Sydney, of the Department of Education, and of the private secondary schools registered under the Act.

Schools desiring to educate bursars or competitors for bursaries must register with the Bursary Endowment Board. Such registration, which is effective for two years, is conditional upon the suitability of school premises, the organisation and equipment of the school, the method and range of instruction, efficiency of the teaching staff, and the general conduct of the school.

Under the general conditions attached to registration a school must be capable of providing a full course of instruction beyond the primary stage to a standard not lower than that of the Leaving Certificate. As at 31st December, 1921, eighty-one schools were registered under the Bursary Endowment Act, while sixty-one other private schools were recognised as qualified to educate pupils to the Intermediate Certificate stage of the secondary course.

Bursaries admitting to a course of secondary instruction are awarded to pupils between the ages of 12 and 14 years, whose parents' income is less than £240 per annum, or not more than a quota of £60 per annum for each member of the family, exclusive of children earning 15s. or more weekly. One-third of the bursaries are available for pupils of metropolitan and suburban schools, and special provision is made for small country schools.

Each bursary comprises a grant of text-books not exceeding in value £1 10s. per annum, and a monetary allowance of £40 for the first and second years, and £50 for the third and fourth years, to holders who live away from home in order to attend school, the allowance being reduced in the case of those who reside at home. The bursaries are extended usually for a fifth year.

Bursaries are awarded upon the results of the Intermediate Certificate Examination. These bursaries are of the value of third and fourth year bursaries, and are tenable for two or three years.

Bursaries tenable at the University of Sydney may be awarded to candidates at the Leaving Certificate examination who are under 19 years of age and whose parents' means are unequal to the expense of a University education. A full bursary entitles the holder to a grant for text-books not exceeding £5 per annum, and to free education. An allowance not exceeding £25 per annum is made to those who need not board away from home, in order to attend the University, and not exceeding £65 per annum to those who must do so. The number of such bursaries awarded annually ranges from twenty-five to forty.

At 30th June, 1922, excluding 565 holders of war bursaries, there were 1,427 pupils holding bursaries under the Bursary Endowment Act; 1,300

were attending courses of secondary instruction, and 127 were attending University lectures. The annual monetary allowances paid were as follow :—

Allowances.	Bursars.	Allowances.	Bursars.
£		£	
12	407	40	340
18	149	50	260
24	146	60	2
25	65	65	58
		Total ...	1,427

War bursaries are provided by the Bursary Endowment Board for children of incapacitated and fallen soldiers ; and may be awarded to assist holders during primary, secondary, or University courses, or in technical, trade, or agricultural instruction ; they may be applied also to augment the wages of apprentices. War bursaries are tenable for a period not exceeding two years, but are subject to renewal. Up to 30th June, 1922, war bursaries had been awarded in 989 cases ; the number in operation at that date was 565, and the expenditure for the year amounted to £6,001.

A sum of money, amounting to £7,726, was raised by public subscription to provide war bursaries, and the fund, known as the Anzac Memorial Bursary Fund, has been invested in the Bursary Endowment Board. Up to 30th June, 1922, the number of these bursaries awarded was 33 ; each bursary bears the name of its founder and is tenable at a secondary school.

In addition to the bursaries made available by the Bursary Endowment Board, three bursaries, tenable for three years, may be awarded at the Hawkesbury Agricultural College ; three, tenable for two years, at each of the Farm Schools at the Bathurst and Wagga Experiment Farms ; and one, tenable for one year, at the Apprentice School at Wollongbar Experiment Farm.

#### COMMERCIAL EDUCATION.

Preparatory education for commercial life has been provided in the State primary schools, where the course of instruction, especially in the Commercial Continuation Schools, includes elementary training in many commercial subjects ; economics, shorthand, and business principles and practice are included in the curriculum of the High Schools. Many private schools and colleges also afford facilities for commercial training, both by day and evening classes ; book-keeping, business methods, shorthand, and typewriting are the main subjects taught.

A complete return of the number of pupils taught in these special subjects is not available, but statistics of the State Commercial Continuation Schools have been supplied on a previous page, and particulars obtained from Business and Shorthand Schools under private management show that sixteen were in operation in 1921 with 114 teachers, and a total enrolment of 3,233 boys and 4,102 girls ; the average attendance during the year was 2,832.

Advanced preparation for commercial life has been provided in some measure by the University course in Economics and Commerce. The diploma course was converted in 1913 into a degree course.

A special grant is paid from the Public Revenue of the Commonwealth to the University to assist in the teaching of languages serviceable to the development of commercial relations between Australia and other countries. By this means a lectureship in Japanese language and Oriental history has been established.



## DOMESTIC TRAINING.

In the reorganisation of Superior Public Schools provision was made for the establishment of Domestic Superior Public Schools for girls. The syllabus came into operation at the beginning of 1913, and the course includes household accounts, cookery, laundry work, dressmaking, millinery, gardening, art of home decoration, music, social exercises, morals and civics, and physical training, as well as a course in English, designed to encourage a taste for wholesome reading. Three hours per week are devoted to cooking and laundry, the course being practical and diversified. Personal hygiene, nursing of sick, and care of infants receive considerable attention. Botany and gardening are taught, and, while the course is designed primarily to train girls to manage a home, provision is made also for a training in commercial horticulture, and after the completion of the domestic course a third year course of business lessons has been arranged to fit girls to take up work in commercial houses in the city.

During 1921 sixty-nine schools for practical cookery were in operation, the enrolment being more than 5,300; in addition, demonstrations in cooking were given to another 6,620 pupils. The Technical College provides more advanced courses.

The courses of study provided at Secondary Schools include needlework, art, and music.

A School of Domestic Science was established recently at the Sydney University. The course for the degree of Bachelor of Science in Domestic Science covers a period of three years, and includes Physics, Chemistry, Physiology, and Botany or Zoology, Public Health, and the course in Domestic Science at the Sydney Technical College.

## INDUSTRIAL TRAINING.

Industrial training is connected intimately with the question of apprenticeship, and from time to time attempts have been made to relate school training and apprenticeship by providing useful courses for boys who finish the primary course of education at the age of 13 years and cannot enter apprenticeship before the age of 16 years by revising the nature and conditions of apprenticeship, and by establishing a Boys' Vocational Bureau. Technical instruction in the form of manual training is a feature of the primary school syllabus, and a preparatory course leading to the trade courses under the Technical Education System is given in the Junior Technical Continuation Schools.

The course in the Continuation Schools, covering two years, was planned with the object of supplying a useful introduction to industrial occupations for boys. The subjects of instruction which were chosen with the intention of meeting the needs of the future artisan are essentially of a practical nature, viz.:—Practical Drawing and Workshop Practice, English, Practical Mathematics, History and Civics, Industries and Elementary Science; at the same time attention is given to the training of pupils in citizenship, and corporate life is made a feature of the school organisation.

Higher courses of instruction are given in the institutions under the Technical Education system hereinafter described. Consideration has been given to the question of extending the period of compulsory education beyond the present limits as defined by the Public Instruction Act. For apprentices in a number of trades a measure of compulsion is supplied already by means of awards and agreements under the Industrial Arbitration system. In some instances, they contain clauses which make attendance at a technical course obligatory on the part of the apprentices, while the

employers are required to pay the fees, other awards require the apprentices to obtain certificates of attendance before admission to the trade as journeymen. In some trades in which attendance is optional, the employers must pay the fees of the apprentices who attend the technical schools, and in others higher rates of wages are prescribed for apprentices who pass the technical examinations.

In a few instances provision has been made either by award or by the voluntary action of the employers for attendance of apprentices at day classes, but generally the apprentice is regarded as a full time wage-earner and attendance is in addition to the day's labour in the workshop.

#### AGRICULTURAL AND RURAL TRAINING.

Education in subjects pertaining to rural industries commences in the primary schools with the teaching of the elementary principles of agriculture, both practical and theoretical. School gardens and experiment plots are adjuncts to many State schools, and grants are made of farm, vegetable, and flower seeds.

In the Murrumbidgee Irrigation Area a special teacher of agriculture visits the seven local schools for the purpose of supervising a special course in practical experimental agriculture. Instruction in general farm work is a feature of the treatment of delinquent and neglected children at the Farm Schools at Gosford and Mittagong.

Particulars regarding the operation of these institutions will be found in a later chapter of this Year Book dealing with Social Condition.

In the country high schools at Albury, Orange, and Wagga, and in the Casino District School, courses in agriculture are provided, and a special Agricultural High School is situated at Hurlstone Park. The grounds at Hurlstone Park, covering 26 acres, are used for teaching practical operations and for experimental work in the growth of crops, action of fertilisers, etc. The course at this school extends over three years, and covers a general English education in addition to science with laboratory practice, and agriculture with field work. The training at Hurlstone Agricultural High School forms a preparatory course to the more advanced work at Hawkesbury Agricultural College. The residence of the late Sir Samuel McCaughey, at Yanco, was acquired for the purpose of an Agricultural High School, and opened in 1922 with an enrolment of 70 students, all of whom were in residence. During 1921, there were 174 students at Hurlstone. For resident students the fee is £6 6s. per quarter; for day students no fees are charged. A Supervisor in Agricultural Education was appointed in 1921.

Supplementing the training up to the standard of the Leaving Certificate Examination given to pupils under the Department of Education, a graduated scheme of agricultural instruction is organised in connection with the development of rural industries, by the Department of Agriculture of New South Wales. Full particulars relating to the Hawkesbury Agricultural College and the Experiment Farms will be found in the chapter relating to Agriculture; there were 539 students at these institutions during 1921.

The Diploma course at the Hawkesbury Agricultural College covers three years' work, but certificates may be obtained for shorter courses. Students holding the Diploma of the College may be permitted to complete the course for the degree of Bachelor of Science in Agriculture at the University in three years instead of four.

The final stages of agricultural education and training are reached at the University, where, in the beginning of 1910, a degree course in Agriculture was instituted. A four-years' course leads to the degree of Bachelor of Science in Agriculture, and, in providing a higher training ground for teachers and experts, completes the whole system of preparation for rural industries. The Experiment Farms are available for the practical and experimental work in connection with the degree course.

In Veterinary Science a course extending over a period of four years leading to the degree of Bachelor of Veterinary Science is provided at the University.

#### SCHOOL SAVINGS BANKS.

A system of school savings banks in connection with the State schools was initiated in the year 1887, and by this means £822,314 have been received in deposits, and £161,303 transferred to the Government Savings Bank as children's individual accounts. The object of these banks is to inculcate principles of thrift during the impressionable ages.

In 1921 these banks numbered 847; the deposits amounted to £67,669, and withdrawals, £67,299; £9,116, representing individual sums of £1 and upwards, were transferred to the Government Savings Bank, leaving £18,197 as credit balances in the school banks.

#### DELINQUENT, DEFECTIVE, AND DEPENDENT CHILDREN.

Special provision has been made for delinquent, defective, and dependent children in several reformatories and industrial schools maintained by the State and in private charitable institutions.

The education of deaf and dumb and blind children is undertaken at a school in connection with the Institution for the Deaf and Dumb and the Blind; deaf mutes are trained also at two religious institutions.

Extensive special measures have not yet been taken for the education of feeble-minded children, but the matter is under consideration, and statistics as to retardation are collected by the Department of Education.

#### MEDICAL INSPECTION OF CHILDREN.

The Medical Branch of the Department of Education undertakes the medical inspection of the school children attending State and private schools; the work is arranged so that each child is examined every three years. Treatment of physically defective children in country districts is provided by means of a travelling school hospital and travelling clinics; there is also a metropolitan dental clinic. Details regarding the medical inspection of school children and the school clinics will be given in the chapter of the Year Book relating to Social Condition.

The work of the medical officers of the Department of Education includes the investigation of epidemics of infectious diseases affecting school children; the inspection of school buildings; courses of lectures at the Teachers' College; lectures to senior girls in metropolitan schools on the care of babies, personal cleanliness, home hygiene, sick-nursing, etc., and lectures to parents.

#### STATE SCHOOLS.

The following table affords a comparison between the numbers of the various types of State schools in operation at the end of 1881, the first

full year in which the Department of Education was under immediate ministerial control, and the numbers open at later periods.

Type of School.	Schools at end of year.					
	1881.	1891.	1901.	1911.	1920.	1921.
Secondary Schools—						
High ... ..	...	5	4	8	27	27
Intermediate High ... ..	...	...	...	...	23	25
District ... ..	...	...	...	...	11	13
Continuation Schools—						
Commercial ... ..	58*	78*	113*	145*	17	15
Junior Technical ... ..					24	26
Domestic ... ..					47	46
Primary Schools—						
Public ... ..	1,007	1,686	1,874	1,915	2,022	2,020
Provisional ... ..	227	320	398	475	440	477
Half-time ... ..	83†	280	414	271	115	90
House-to-house and Travelling ... ..	...	83	17	6	4	4
Correspondence... ..	...	...	...	...	2	3
Subsidised ... ..	...	...	...	414	509	546
Evening Schools—						
Primary ... ..	33	13	34	16	...	...
Continuation ... ..	...	...	...	18	41	46
Industrial and Reformatory ... ..	2	3	4	2	3	3
Total—						
Primary ... ..	1,352	2,385	2,741	3,117	3,136	3,189
Secondary and Continuation ... ..	58	83	117	153	149	152
Number of Schools per 1,000 of population—						
Primary ... ..	1.73	2.05	1.99	1.83	1.51	1.51
Secondary and Continuation ... ..	.07	.07	.09	.09	.07	.07

\* Superior Public Schools.

† Including Third Time Schools.

The number of schools is not of itself an accurate indication of the effective provision of educational facilities, even when considered in relation to population. During the past forty years population has tended increasingly to congregate in cities and other urban centres, while, with the decline of the birth-rate, the proportion of children in the population has dwindled. For these reasons the relative number of public schools required has decreased, but on the other hand the proportionate number of private schools has also decreased heavily.

The small number of secondary schools provided prior to 1912 is shown in the table, which also indicates the great expansion which occurred thereafter, the increase being from eight in 1911 to sixty-five in 1921, largely due to the provision of High and District Schools in country towns.

These schools largely supplanted the Superior Public Schools existing in 1911, at which a certain amount of secondary instruction was given. In addition to the secondary schools shown above for 1921, there were fifty-seven primary schools, at which composite secondary courses were being given. These were in a way analogous to the Superior Public Schools of former years.

A notable feature is the changes among schools provided in rural districts where population is scanty. Provisional schools have increased in numbers, but part-time schools (Half-time, House to House, and Travelling), have in many cases been supplanted by smaller full-time schools, subsidised by the

Government, and by correspondence schools, three of which, with nineteen teachers, educated in 1921 more than 1,000 pupils in remote localities.

Evening schools have never operated extensively, but recent innovations have increased their popularity.

Particulars of each class of school existing in 1921 are given below : —

#### *Kindergarten.*

Kindergarten methods under the Montessori system have been adopted as far as practicable in the infant schools under the Department of Education, and in various large schools throughout the State, Kindergarten classes are conducted for the purpose of bringing young children under refining influences.

During the year 1921 classes were in operation in 152 public schools; seventeen were separate infant schools, and the remainder were primary schools with Kindergarten departments attached; the number of pupils enrolled for Kindergarten instruction was 9,296, the average attendance being 7,148.

#### *Primary Schools.*

Primary work in its various stages is undertaken in schools classified broadly into three groups,—(a) Primary and superior schools in more or less populous centres; (b) schools in isolated and sparsely-settled districts, viz., Provisional, Half-time, House-to-house, and Subsidised schools; and (c) Correspondence Schools, instructing children so isolated as to be unable to attend school.

The schools are classified according to the average attendance into six classes. The number in each group, at 31st December, 1921, is shown in the following statement; each pair of half-time schools is counted as one, and the separate infants' schools, the subsidised, evening continuation, and reformatory schools are excluded.

Class of School.	Average Attendance required.	Schools in Operation, Dec., 1921.	Class of School.	Average Attendance required.	Schools in Operation, Dec., 1921.
I.	Over 1,000	44	VI.	40 and under.	1,220
II.	751-1,000	26	Provisional.	...	477
III.	541-750	41	Half-time.	...	90
IV.	201-540	138	Travelling and	}	4
V.	41-200	534	House to House		
			Correspondence.	...	3

A Public School may be established in any locality where the attendance of twenty children is assured. In most schools boys and girls are taught together, but schools with an average attendance of 360 pupils are divided into two departments, and those with an attendance exceeding 600 into three departments, viz., boys, girls, and infants.

The infants' course extends over a period of two years. The primary course for older children, completed generally between the ages of 13 and 14 years, includes English, mathematics, geography, elementary science, nature knowledge, civics and morals (history, Scripture, moral duties and citizenship), art and manual work, music, and physical education as prescribed in the syllabus issued by the Department of Education.

*Schools in Sparsely Settled Districts.*

Provisional schools are maintained where there is an attendance of at least ten pupils, and in places, where doubt exists as to the permanence of the settlement. Half-time schools are established where a number of children sufficient to maintain a minimum attendance of ten pupils can be collected in two groups, not more than 10 miles apart. One teacher divides his time between the two groups, so arranging that home-work and preparatory study shall occupy the time of each pupil in his absence from either school. The course of instruction in provisional and half-time schools follows the course of full-time schools.

Small schools are not established where it is convenient to arrange for the daily conveyance to a central school of the pupils from the surrounding neighbourhood. In such cases local committees consisting of parents, the teacher of the central school, and other persons of repute, are required to assume responsibility for entering and supervising the contract for the carriage of children, but the cost of conveyance is defrayed by the Department according to fixed rates. In 1921 pupils were conveyed to 820 central schools, at a cost of £35,286.

There are three travelling schools and one house-to-house school in operation. The travelling schools visit localities where the families are so isolated that two cannot combine readily for the education of the children. The first commenced operations in 1908, when the teacher was provided with a vehicle to carry school requisites, and a tent for use as a schoolroom, in which to teach for a week at a time at each centre in his circuit.

Another type of school for the benefit of families in remote districts is the subsidised school, which may be formed where two or more families combine to engage a teacher. The teacher, if approved by the Department of Education, is paid an annual subsidy at a rate based on the average attendance, viz., in the eastern portion of the State £5 per pupil up to a maximum of £70, and in the western division £6 per pupil up to £80. The course is as far as practicable the same as in primary schools, and the subsidised schools are subject to inspection by the State school inspectors. A subsidised school may be established by a single family with at least four children of school age. As an alternative to subsidising a teacher, payments may be made under certain conditions as an aid towards boarding children in a township for the purpose of attending a public school.

*Correspondence Schools.*

At the beginning of 1916, further efforts were made, by means of teaching by correspondence, to extend educational facilities to children in remote localities. The experiment was commenced with three pupils, and met with such success that operations have been extended considerably. The course of instruction covers the ordinary primary course up to the standard of the Qualifying Certificate examination, and some of the pupils have passed this test with credit. A pupil is not admitted before the age of 7 years, and the young children are taught by kindergarden teachers, illustration being employed largely with satisfactory results. There were three correspondence schools in operation at the end of 1921 with an enrolment of 1,040 pupils taught by nineteen teachers.

## SECONDARY EDUCATION IN STATE SCHOOLS.

Prior to the year 1912 the facilities provided by the State for secondary education had grown slowly and were then limited to eight High Schools at which students were required to pay fees. But in that year a comprehen-

sive system of free secondary education was instituted. All fees were abolished, the number of bursaries and scholarships was greatly increased, and, later on, text books were provided free to all students. The provision of facilities on these liberal terms caused a strong demand for secondary education, and, within the next nine years, the number of students attending high and district schools trebled, the number of students enrolled during 1921 being more than 15,000. Fees were re-imposed in High Schools in 1923. Admission to High Schools is gained by competitive examination and only properly qualified pupils are allowed to enter.

The courses of instruction provided at High Schools cover five years, leading to the Leaving Certificate Examination, at which candidates may matriculate, while the courses of instruction at Intermediate High and District Schools cover the first three years of that course, leading to the Intermediate Certificate Examination. The courses are for the most part educational only, but the Intermediate and Leaving Certificates are generally accepted as proof of sufficient educational qualification for admission to the Public Service, the teaching profession, banks, and kindred bodies.

Secondary courses with a more directly vocational bias are also provided in Superior or Continuation Schools, some of which have now been converted into Intermediate High Schools providing commercial courses.

At the beginning of 1923 there were nine High Schools in the metropolitan area (including a Technical High School) and seventeen in the country districts providing a full course of instruction. At all of these fees to the amount of £2 2s. per term are charged, subject to exemptions in certain cases by the Minister. There were twenty-eight Intermediate High Schools, thirteen (including two Agricultural High Schools) being in the country, and twelve District Schools, at which secondary education is free, a deposit of £1 being required in certain cases as a guarantee of attendance for at least one year.

The following statement shows the number of pupils receiving recognised secondary education at State schools in 1921, in comparison with the number in 1913, the first year for which particulars are available:—

Schools.	1913.			1921.		
	Number of Schools.	Gross Enrolment.	Average Daily Attendance.	Number of Schools.	Gross Enrolment.	Average Daily Attendance.
High, and District Superior Public (Day Continuation)	42	6,392	4,712	65	15,376	12,747
Commercial ... ..	32	1,724	893	15	1,162	631
Junior Technical ... ..	20	804	416	26	3,853	2,375
Domestic ... ..	52	1,601	778	46	6,337	3,634
Total, Superior...	104	4,129	2,077	87	11,352	6,637
Country Primary*	...	...	...	57	1,530	1,281
Total, Secondary	146	10,521	6,789	209	23,258	20,663

\* Secondary pupils.

Certain large primary schools in the country districts, from which secondary schools are not readily accessible, provide extended courses of study leading to the Intermediate Certificate, the Commercial Superior Public School Certificate, and the Public Service Entrance Examinations.

The average daily attendance of secondary pupils has trebled in the last eight years.

*Growth of High Schools.*

The following particulars relate to High Schools and Intermediate High Schools maintained by the State:—

Year.	High Schools.	Inter- mediate Schools.	Teachers.			Pupils.			Holders of--		Cost per head of enrolment. •
			M.	F.	Total.	Enrolment.		Average Attendance.	Bur- saries.	Scholar- ships.	
						Total.	Average Quarterly.				
1901	4	...	16	11	27	676	526	489	†	†	£ s. d. 9 15 2
1911	8	...	59	38	97	2,293	1,864	1,786	201	250	10 6 10
1916	19	3	195	146	341	5,888	5,330	4,780	748	1,165	21 8 0
1917	21	3	172	170	342	6,780	6,236	5,555	861	693	14 12 11
1918	22	4	214	195	409	7,454	6,793	6,047	929	390	14 8 2
1919	23	4	229	215	444	7,750	6,784	5,949	990	†	16 16 8
1920	27	23	310	274	584	12,636	9,575	8,805	1,064	†	18 2 0
1921	27	25	349	299	648	14,247	12,199	11,253	1,005	†	17 10 0

\* Including buildings. † Not available. ‡ Additional scholarships were not awarded after 1916, in which year the free supply of text-books and materials commenced.

This rapid expansion in secondary schools affords evidence of a widespread desire for education among the people, and the anxiety to take advantage of the improved facilities has imposed on the Department the necessity of excluding by means of competitive examination for admission those less qualified to benefit from a course of secondary education. A corresponding growth in the number of University undergraduates is evident after 1916, in which year students educated entirely under the new system introduced in 1911 were first able to qualify educationally for matriculation.

Arrangements are being made for the establishment of hostels in connection with the High Schools in country districts; five hostels are already open and sites have been purchased for two others.

## EVENING CONTINUATION SCHOOLS.

Evening Continuation Schools have been established for the benefit of those who leave school at the termination of the primary course to engage in occupations. They are organised on the same lines as the Day Continuation Schools; the courses, which extend over a period of two years, are similar, though they are necessarily modified for pupils who, after work during the day, attend the classes for only a few hours per week. An Evening Continuation School may be established in any centre where the number of students who will guarantee to attend for two years is sufficient. A fee of 6d. per week is charged, but it is refunded at the end of each year to the students whose conduct and attendance have been satisfactory. The average age of the pupils attending the Evening Continuation Schools is 18 years.

The following is the record of the Evening Continuation Schools for the years 1920 and 1921:—

Classification.	1920.			1921.		
	Number of Schools.	Average Weekly Enrolment.	Average Weekly Attendance.	Number of Schools.	Average Weekly Enrolment.	Average Weekly Attendance.
Junior Technical (Boys)...	16	947	734	17	1,290	994
Commercial (Boys) ...	17	1,340	1,046	18	1,586	1,245
Domestic (Girls) ...	8	257	171	11	821	531
Total ...	41	2,554	1,951	46	3,697	2,770



The large increase in the enrolment and attendance in 1921 was due partly to the opening of new schools, but also to reorganisation of the curricula and the addition of social attractions for pupils.

#### PRIVATE SCHOOLS.

By virtue of the Act of 1916, children between the ages of 7 and 14 years must be provided with efficient education, and a school is not recognised as efficient unless it is so certified by the Minister of Education, who takes into account the standard of instruction, the qualifications of the teachers, the suitability of the school premises, and the general conduct of the school. This provision applies to both primary and secondary schools where children of statutory ages are educated. The conditions upon which benefits under the Bursary Endowment Act are extended to private secondary schools involve a similar inspection and certification, and nearly all of these have been registered by the Department of Education. The standards of instruction required of private schools under both Acts are the same as those of public schools of similar grade and situation. Public examinations are based upon the curricula of State schools, and this tends to establish still greater uniformity in the standards of instruction.

The total number of certified private schools in 1921 was 677, and of these 142 were also registered as recognised secondary schools.

Formerly secondary education was left largely in the hands of private institutions, but since the inauguration of an extended system of secondary education by the State in 1912, State secondary schools have approximately the same magnitude as those conducted privately.

The fees charged at private schools vary considerably, numerous schools being residential. In certain denominational private schools the payment of fees is to some extent voluntary. Some scholarships and bursaries have been provided by private subscriptions for the assistance of deserving students. In December quarter, 1921, of the total number of children attending school 19.9 per cent. were enrolled at private institutions. Sufficient data are not available to permit the classification of these schools according to the standard of instruction supplied, but such is being sought in relation to 1922.

Classification.	1911.				1921.			
	Schools.	Teachers.	Enrolment December Quarter.	Average Daily At- tendance.	Schools.	Teachers.	Enrolment December Quarter.	Average Daily At- tendance.
Undenominational ...	291	1,216	10,141	8,621	148	821	8,131	6,875
Roman Catholic ...	401	2,034	46,097	38,657	455	2,620	63,060	50,883
Church of England ...	54	306	3,297	3,084	58	465	5,265	4,562
Presbyterian ...	4	48	370	327	4	75	788	776
Methodist ...	2	36	311	264	2	57	605	573
Lutheran ...	1	1	34	24	2	2	51	48
Seventh Day Adventist	2	12	213	188	5	12	301	228
Salvation Army ...	...	...	...	...	2	4	163	127
Hebrew ...	1	6	500	404	...	...	...	...
Theosophical ...	...	...	...	...	1	13	96	100
Total ...	756	3,659	60,963	51,569	677	4,069	78,460	64,172

Included in the number of teachers, as shown in the table, are those who visit the schools to give tuition in special subjects only, the figures for 1921 being 2,928 permanently attached to the teaching staffs of the schools, and 1,141 visiting teachers, as compared with 2,628 staff teachers and 1,031 visiting teachers in 1911.

The number of scholars attending private schools has increased since 1910, despite a decline in undenominational schools, but the increase has not been at so fast a rate as in public schools. More than 80 per cent. of the pupils at private schools were enrolled at Roman Catholic establishments, which, since 1911, have grown at a faster rate than the population.

#### *Private Kindergarten Schools.*

Free Kindergarten schools are conducted by the Kindergarten Union of New South Wales, which is assisted by a grant from the Government, amounting in 1921-22 to £1,000. In 1921 there were 11 Free Kindergarten schools with 45 teachers; the number of scholars on the roll during the December quarter was 584, all except 37 being under 7 years of age. The average daily attendance was 462, and the gross enrolment for the year, 718. In addition some of the ordinary private schools also have departments for Kindergarten work.

A private institution supplies training for teachers in Froebelian methods, and the free Kindergartens provide observation and practice schools.

#### *Kindergarten Playgrounds.*

In recognition of the fact that normal physical development is fundamental to proper mental training the modern tendency is to defer the age of school attendance and formal instruction, and to bring young children under supervision in playgrounds set apart for their exclusive use. In these areas the children are engaged in organised games, under trained Kindergarten supervisors, and special attention is directed to physical welfare, and to the cultivation of hygienic habits. The organisations engaged in the promotion of the welfare of children are devoting greater attention to the needs of children below the statutory school age—7 years. The Kindergarten Union maintains three Kindergarten playgrounds in the Metropolis; another is attached to the welfare centre, opened recently by the Child Welfare Association; and in Victoria Park, also in the city area, a playground for children is maintained under the supervision of a State Kindergarten teacher. The establishment of additional playgrounds is under consideration.

### TECHNICAL EDUCATION.

The first class for Technical Education in New South Wales was established by the Sydney Mechanics' School of Arts in 1865. The scheme passed under Government control in 1883, and the Sydney Technical College was opened in 1892.

Technical Education is under the direct control of the Department of Education, and is administered by a superintendent, with financial and general procedure independent of other branches of the education system. The courses of instruction are co-ordinated, however, with those of the ordinary schools, viz., technical classes in Public Primary Schools, the Junior Technical Continuation Schools, the Trades' Schools, and the Technical High School.

The system of Technical Education is administered from the Central Technical College, Sydney; branch Technical Colleges have been established at East Sydney, Newcastle and Broken Hill; and Trade Schools have been instituted in seventeen country and suburban centres. Several large departments of technical education have been transferred from the Central Technical College to the branch at East Sydney (Darlinghurst) whereby allowance has been made for the growth and extension of higher technical education.

Specialised instruction in the practice of a wide range of callings is provided for the apprentice, improver, and journeyman, while higher courses, embracing the technology of the various trades and technical professions, may be followed by more advanced students.

Intending students are required to furnish evidence that they possess sufficient preparatory knowledge to take profitable advantage of the training, and a student is not admitted to a course unless actually engaged in the specific trade to which the course relates. Special provision is made for the admission of journeymen, without preliminary test, to any part of the courses relating to their trades; and young students are admitted if they furnish a guarantee to become apprenticed before reaching the limit of the age of apprenticeship.

A noteworthy feature of the system is the existence of advisory committees in connection with each course of instruction. These committees are composed of representatives of employers and employees, who visit the classes regularly and discuss with the Superintendent and heads of departments matters relating to the maintenance of standards of efficiency in equipment and teaching, and by this means the courses are made to meet practical needs.

The lower Trade Courses cover a period of three years in the Trade Schools, and the Higher Courses of two years are given in the Technical Colleges. The subjects are grouped to form trade classes, instruction being given in all branches of mechanical and electrical engineering, building, sanitation, and artistic and manufacturing trades. Instruction is given also in women's handicrafts (which include domestic science, cookery and laundry work), and in window dressing, and tailor's cutting, but these subjects are not included in the trade or diploma classes. Special courses of instruction in Sanitary Science, Draining and Water Fitting, Meat Inspection, and Printing (composing) are conducted by means of correspondence.

Certain of the higher courses of evening instruction are co-ordinated with first year courses at the University.

The satisfactory completion of any course of instruction is marked by the award of certain certificates, viz., the Certificate of Trade Competency in trade courses and the College Diploma in the higher courses. These certificates are recognised by employers.

A liberal system of scholarships has been instituted enabling students who gain them to pass without payment of fees from Junior Technical Schools, through Trade Schools, and Technical College to the University. These scholarships usually carry grants of text books and instruments.

The fees payable for instruction are very low, being usually at the rate of 4s. per term of thirteen weeks for juniors, and 8s. for seniors.

The following table shows the number of classes and teachers and the enrolments at the Technical College and Trades Schools during the last five years, together with the amount of fees received and of money expended.

Year.	Number of Classes.	Lecturers and Teachers.	Total Enrolment.*	Individual Students.	Average Weekly Attendance.	Fees Received.	Net Expenditure.
1917	544	343	15,065	8,401	11,072	£ 9,354	£ 94,163
1918	572	369	15,936	8,717	12,156	9,422	86,700
1919	557	379	14,580	7,827	10,949	8,788	87,669
1920	638	406	18,119	9,258	13,808	12,701	115,195
1921	636	447	18,974	9,696	†	12,641	129,851

\* Includes students who have joined more than one class.

† Not available.

The enlistment of students for military service affected the attendance during the war, while in 1919 the abnormal conditions accompanying an outbreak of influenza adversely affected both enrolment and attendance. During 1921 the marked expansion which had occurred in the technical education in 1920 was maintained and a further increase manifested.

#### *Technical Education Examinations.*

The following are particulars of examinations conducted in the Technical Education Branch during the last five years :—

Particulars.	1917.	1918.	1919.	1920.	1921.
Number Examined ... ..	6,407	7,410	6,367	9,268	12,075
Number of Passes ... ..	5,444	5,648	5,003	7,747	9,907
Percentage of Passes ... ..	84.9	76.2	78.5	83.5	82.0
Number Obtaining Honours ...	512	785	652	1,154	1,537

These figures afford evidence of a very encouraging growth in this important branch of education, but a wider expansion is desirable. The year 1919 was affected adversely by an epidemic of influenza.

#### UNIVERSITY OF SYDNEY.

The University of Sydney was incorporated by Act of Parliament passed in New South Wales on 1st October, 1851, its scope being then limited to promoting study in Arts, Law, and Medicine. It was granted a Royal Charter on 27th February, 1858, when its graduates were accorded the same status in the British Empire as that of graduates of the Universities of the United Kingdom.

Subsequent legislation extended the scope of the University from time to time, and the various Acts were consolidated by "The University and University Colleges Act, 1900," which as amended in 1902, 1912, and 1916, constitutes the present statutory basis of the University of Sydney. The University is incorporated as a body politic, consisting of a Senate comprising twenty-four fellows, of whom four are appointed by the Governor, one is elected by each House of Parliament, five represent the teaching staff of the University, ten are elected by the graduates, and three are elected by the aforesaid fellows. This Senate has complete powers of management in the affairs of the University, and it may provide such instruction and grant such degrees as it thinks fit, except in Theology and Divinity, from which it is precluded by statute.

Within the University there are now ten faculties, viz., Arts, Law, Medicine, Science, Engineering, Dentistry, Veterinary Science, Agriculture, Architecture, and Economics, besides a School of Domestic Science. Degrees are awarded each of these faculties in addition to diplomas in Economics and Commerce, Education, Pharmacy, Public Health and Tropical Medicine. Since 1884 women have been eligible for all University privileges.

University lectures (except in Law) are delivered in buildings within the University grounds, and all buildings (excepting the Law School) are in close proximity to the main administrative block containing the Great Hall, Offices, the Schools of Arts and Economics, and the Fisher Library, bordering the quadrangle. Separate buildings are provided for the other faculties, and in convenient positions, on the 126 acres of land vested in the Senate are situated the Macleay Museum, separate club houses for men and women, the five Affiliated Colleges, the Teachers' College, Royal Prince Alfred Hospital, and the Sports Oval.

Although the object of the University is to provide secular instruction to all students on equal terms, the various religious denominations have been permitted to establish residential colleges within the University grounds in which to supplement University training and instruction. These colleges are the Church of England (St. Paul's), Roman Catholic (St. John's), Presbyterian (St. Andrew's), Methodist (Wesley), and the Women's College, the lastnamed being conducted on an undenominational basis. The Teachers' College, which is non-residential and is not affiliated with the University, is maintained by the State for the training of its teachers, and is situated in the University grounds for the sake of convenience. By-laws have been promulgated enjoining the residence of all University students in approved lodgings but these are not enforced.

Many benefactions have been bestowed on the University by private persons. These endowments include the Challis Fund, of which the cash balance at 31st December, 1921, amounted to £325,829; the P. N. Russell Funds, £99,489; and the Fisher Estate, £40,489. In addition, the University received in 1921 the sum of £15,907 from the trustees of the McCaughey bequest. Some prizes have been exhausted by award, but by careful investment, increases in value, unawarded scholarships, and other causes, the private foundations showed at 31st December, 1921, credit balances to the extent of £622,380.

#### *University Finances.*

The University is supported chiefly by Government aid and the fees paid by students, but it also benefits to a considerable extent from income derived from extensive private foundations. The income of the University from all the principal sources practically doubled between 1918 and 1921.

The following statement shows the amounts derived by the University from each of the principal sources of revenue, and the total expenditure, during each of the last five years. Under the items are included sums received for special expenditure and amounts from benefactors to establish new benefactions:—

Year.	Receipts.					Disbursements.	Private Endowment Funds - Credit Balance at end of Year.
	Government Aid.	Fees.	Challis Fund and other Private Foundations.	Other Sources.	Total.		
	£	£	£	£	£	£	£
1917	61,654	13,489	27,400	1,090	103,642	93,944	579,521
1918	66,232	15,798	32,439	1,380	115,849	116,347	589,369
1919	67,203	21,353	35,685	1,423	125,669	121,608	597,333
1920	†83,478	33,324	48,371	1,957	167,130	160,203	600,339
1921	†130,112	41,731	59,543	2,113	233,499	211,051	622,380

\* Includes Retiring Allowances Fund. † Includes Building Vote of £25,000 (1920); £50,000 (1921).

During the year 1921 the University received from the Government of New South Wales a statutory endowment of £32,000, and a sum of £50,000 for building extensions under the University (Building) Act of 1919. The total amount of Government aid received during the year was £130,112, including £600 from the Federal Government in connection with Oriental

studies. The State aid included the following sums for the services mentioned :—

	£		£
Scientific Apparatus... ..	3,125	Chair of Chemistry ... ..	3,125
Evening Lectures ... ..	2,875	„ Mechanical Engineering ...	625
Towards Reduction of Lecture Fees	3,125	Tutorial Classes and University	
Extensions of Existing Departments	1,875	Extension ... ..	8,087
Chairs of Agriculture and Veteri-		Instruction in Modern Languages...	1,250
nary Science ... ..	7,500	Science Research Scholarships ...	1,250
Chair of Botany ... ..	2,500	Library ... ..	1,375
„ Economics and Commerce	3,750	Retiring Allowances...	2,500
„ Astronomy ... ..	250	Additions, Repairs, and Furniture	2,500

The principal item of disbursements in each year is for salaries. In 1920 and 1921 the total expenditure was distributed as follows :—

Classification.	Amount.		Percentage of Total.	
	1920.	1921.	1920.	1921.
	£	£	per cent.	per cent.
Salaries ... ..	100,208	116,505	62·6	55·2
Maintenance, Apparatus, etc. ...	37,815	41,510	23·6	19·7
Buildings and Grounds .. ..	1,744	30,722	1·1	14·5
Scholarships and Bursaries ... ..	6,873	6,490	4·3	3·1
Other ... ..	13,563	15,815	8·4	7·5
Total ... ..	160,203	211,051	100·0	100·0

### *Lectures, Staff, and Students.*

Before admission to courses of study leading to degrees, students must afford proof of prescribed educational qualifications by matriculation. Non-matriculated students are admitted to lectures and to laboratory practice, but are not eligible for degrees. On the satisfactory completion of any course, however, they may be awarded a certificate to that effect. Lectures are delivered during the daytime in all subjects necessary for degrees and diplomas, and evening lectures are provided in the Faculties of Arts and Economics, in certain Science subjects, and in Japanese. Students are required to attend at least ninety per cent. of the lectures in each course of study leading to a degree.

Lectures are delivered during three terms of ten weeks in each year. The period of study and total cost of graduation in each faculty are as follow :— Arts, 3 years, £81; Economics, 4 years, £132; Law, 4 years, £103; Medicine, 5½ years, £235; Dentistry, 4 years, £203; Agriculture, 4 years, £125; Veterinary Science, 4 years, £120; Science, 3 years, £105; Engineering, 4 years—Civil, £167; Mechanical and Electrical, £167; Mining and Metallurgy, £181; and Architecture, 4 years, £181. These fees, however, do not apply generally, for 200 public exhibitions or exemptions from the payment of fees are granted annually on the results of the Leaving Certificate examination to students entering the University, and fees are not required of teachers or students in training for the teaching profession attending University lectures. The numbers of University students in 1921 exempt from payment of fees were 741 exhibitors, 241 teachers, 428 students in training as teachers, and 35 others. Thus University education was provided free in 1921 to 1,445 students, or 41 per cent. of the total students in attendance at lectures. More than forty scholarships are awarded from private foundations to meritorious students, and seventeen bursaries may be awarded by the Senate to impecunious students of sufficient merit. In addition, 127 students attending the University in 1921 held bursaries awarded by the State.

The number of degrees conferred by the University from the foundation to the end of 1921 was 6,679, made up as follows:—M.A., 524; B.A., 2,505; B.Ec., 71; LL.D., 28; LL.B., 286; M.D., 69; M.B., 1,281; Ch.M., 941; B.D.S., 85; L.D.S., 30; D.Sc., 27; B.Sc., 386; M.E., 7; B.E., 401; B.V.Sc., 20; B.Sc. (Agr.) 18.

In 1921 the teaching staff of the University included 30 professors, 2 assistant professors, 7 associate professors, and 148 lecturers and demonstrators. Professors and most of the lecturers are paid fixed salaries, and the remainder receive fees. Provision is made for a pension scheme for professors appointed since 1898, the benefit to accrue after twenty years' service, and after attaining the age of 50 years.

The University has no power to confer honorary degrees, but may admit *ad eundem gradum* graduates of approved Universities, viz., Oxford, Cambridge, London, Durham, Victoria, St. Andrew's, Edinburgh, Glasgow, Aberdeen, Dublin, Queen's of Ireland, Melbourne, New Zealand, Adelaide, and of such other Universities as the Senate may determine.

Since 1914 there has been an increase of 95·7 per cent. in the number of students attending lectures. The following statement shows the number attending each course at different periods since 1914:—

Course.	1914.	1919.	1920.	1921.		
				Men.	Women.	Total.
Degree and Special Courses—						
Arts { Day ... ..	310	468	555	276	350	626
Arts { Evening ... ..	223	215	236	159	71	230
Law ... ..	108	189	280	319	9	328
Medicine ... ..	525	881	991	867	118	985
Science ... ..	72	232	233	134	86	220
Engineering ... ..	103	157	229	224	...	224
Dentistry ... ..	27	50	74	79	3	82
Veterinary Science ... ..	14	15	17	16	...	16
Agriculture ... ..	10	27	26	22	6	28
Architecture ... ..	...	40	48	29	26	55
Japanese and Oriental History ... ..	...	12	29	10	2	12
Economics and Commerce ... ..	30	93	150	103	35	138
Diploma Courses—						
Economics and Commerce ... ..	135	183	236	125	23	148
Pharmacy ... ..	50	133	191	174	30	204
Military History and Science ... ..	89	...	...	...	...	...
Massage... ..	...	102	42	3	18	21
	1,696	2,797	3,397	2,540	777	3,317
Less Students included in two Courses.	22	33	41	34	8	42
Total, Individual Students ..	1,674	2,764	3,356	2,506	769	3,275

As a result of the expansion of secondary education in 1911 students in increasing numbers became qualified to enter the University in 1915 and subsequent years. The above table shows the extent of the consequent expansion at the University. The greatest growth is shown in the faculties of Medicine, Law, and Engineering, although considerable growth has occurred in the non-professional faculties—Arts, Science, and Economics and Commerce.

#### *University Clinics.*

The Royal Prince Alfred Hospital is a General Hospital and Medical School for the instruction of University students and for the training of

nurses. Students must pass through the hospital curriculum of study and practice in order to obtain the certificate of hospital practice necessary to qualify for admission to the final degree examination in medicine and surgery. All appointments to the medical and surgical staff of the hospital are made conjointly by the Senate of the University and the directors of the Hospital.

Sydney Hospital, founded in 1811, also provides a Clinical School under the direction of a Board of Medical Studies, and all appointments of clinical lecturers and tutors are subject to the approval of the Senate.

Other hospitals recognised as places where studies may be undertaken in connection with the Faculty of Medicine are:—The Royal Hospital for Women, Royal Alexandra Hospital for Children, St. Vincent's Hospital, the Gladesville and Callan Park Mental Hospitals, the Women's Hospital, the Renwick Hospital for Infants, and the South Sydney Hospital for Women.

In connection with the Department of Dental Studies, the United Dental Hospital of Sydney was established in 1901, and provides facilities for the instruction of students. It was amalgamated with the Dental Hospital of Sydney in 1905. The University lecturers in surgical and mechanical dentistry are, *ex officio*, honorary dental surgeons of the hospital.

#### *Extension Lectures.*

University Extension Lectures were inaugurated in 1886, and have been conducted since that date under the direction of a University Extension Board of eighteen members appointed annually by the Senate. Courses of lectures are given in various centres at a charge of £2 per lecture in country centres, and of £3 elsewhere, upon topics of literary, historical, and scientific interest. At the conclusion of a systematic course, which consists of ten lectures, an examination may be held and certificates awarded to successful candidates.

#### *Tutorial Classes.*

In accordance with the provisions of the University Amendment Act of 1912, the Senate has established evening Tutorial classes, which are open to unmatriculated as well as to matriculated students; diplomas are issued to persons who have studied in these classes for at least one year in any one subject. Tutorial classes, which may be established in particular branches of study upon specific requisition by intending students, have been formed in conjunction with the Workers' Educational Association in suburban and country centres as well as at the University; a resident tutor was appointed at Broken Hill in 1920 and another at Newcastle in 1921. There were over 1,300 students in regular attendance at systematic courses of study during 1921, and fifty-six tutorial classes were at work, twenty-six being in country districts.

#### TRAINING OF SCHOOL TEACHERS.

All teachers entering the service of the State are now required to be trained for their work and must have a preliminary education to the Intermediate or Leaving Certificate standard. Teachers for private schools may also be trained by the State on certain conditions.

The ordinary course at the Teachers' College extends over a period of two years and prepares teachers for the various classes of primary and infant schools. Owing to the urgent demand, teachers of small rural schools are required to undergo an abbreviated course of one year, but the course for teachers of secondary schools extends over four years. Special courses are arranged with reference to departmental requirements and to the capabilities of individual students, and evening extension courses in kindergarten and infant teaching are provided.



The minimum age of admission to the College is 17 years, that is, three years beyond the primary school age, and during this period boys who guarantee to become teachers may obtain an allowance to enable them to undergo a preparatory course in District or High Schools.

*Teachers' College.*

Teachers are trained at the partly completed Teachers' College building at the University, at Blackfriars, and at Hereford House (Glebe). Students are usually granted living allowances during their period of training. A hostel for the accommodation of women students has been established in connection with the College.

There were 928 students enrolled at the Teachers' College in 1921 distributed as follows :—

Students.	Men.	Women.	Total.
First year ... ..	79	104	183
Second year ... ..	80	106	186
Third year ... ..	40	53	93
Fourth year ... ..	24	41	65
Fifth year ... ..	2	3	5
Graduate ... ..	2	8	10
Short Course (one year) ... ..	109	270	379
Cookery ... ..	.....	7	7
Total ... ..	336	592	928

Of these students attending the Teachers' College 885 were in receipt of living allowances, 40 were exempt from the payment of fees, and 3 were paying fees.

The staff of the College consists of a Principal, Vice-Principal, 50 lecturers, 5 visiting lecturers, a warden of women students, and 8 clerical and library assistants. Members of the teaching staff are afforded opportunities to study abroad, and leave of absence, on full pay, may be granted for this purpose.

*Classification of State Teachers.*

Teachers in the service of the State are expected to obtain classification either on leaving the Training College or within two years thereof, and they may advance thereafter by acquiring prescribed educational and practical attainments.

A comparative statement of the classifications of the teaching staff of the State schools for the years 1911 and 1921 is shown below; those in the Technical Education Branch are not included.

Teachers.	1911.			1921.		
	Men.	Women.	Total.	Men.	Women.	Total.
Teachers and Assistants—						
First Class ... ..	255	71	326	418	132	550
Second Class ... ..	750	542	1,292	1,200	900	2,100
Third Class ... ..	1,259	699	1,958	1,120	1,442	2,562
Unclassified ... ..	714	1,053	1,767	275	936	1,211
Awaiting Classification ... ..	89	86	175	165	653	818
Cookery Teachers ... ..	...	47	47	...	68	68
Sewing Mistresses ... ..	...	112	112	...	169	169
High School Teachers ... ..	59	38	97	349	299	648
Subsidised School Teachers ... ..	39	386	425	27	519	546
Total ... ..	3,165	3,034	6,199	3,554	5,118	8,672
Students in Training ... ..	144	174	318	336	592	928

A marked decrease is noticeable in the number of unclassified teachers and a large proportional growth has occurred among teachers holding first and second class certificates, especially the latter. During this period of ten years the average number of pupils enrolled per teacher remained practically stationary at nearly forty-six.

University education is becoming increasingly popular with teachers, and at the end of 1921 there were 732 graduates in the teaching service, viz., 420 men and 312 women.

Particulars as to the conditions of service, classification, and salaries paid to teachers in public schools were published in the Year Book for 1921.

#### EDUCATIONAL AND SCIENTIFIC SOCIETIES.

Many organisations are in existence in New South Wales which have for their objective the encouragement of professional interests, and the advancement of Science, Art, and Literature. The Commonwealth Government has afforded a measure of recognition to the efforts of Australian men of letters by establishing in 1908 a Commonwealth Literary Fund to provide pensions and allowances to literary men and their families.

As far back as the year 1821 a scientific society, under the title of the Philosophical Society of Australasia, was founded in Sydney, and after many vicissitudes of fortune was merged, in 1866, into the Royal Society of New South Wales. Its objects are the advancement of science in Australia, and the encouragement of original research in all subjects of scientific, artistic, and philosophic interest, which may further the development of the resources of Australia, draw attention to its productions, or illustrate its natural history.

The study of the botany and natural history of Australia has attracted many enthusiastic students, and the Linnæan Society of New South Wales was established for the special purpose of furthering the advancement of these particular sciences. The Society has been richly endowed, and possesses a commodious building at Elizabeth Bay, Sydney, to which are attached a library and museum. The proceedings are published at regular intervals, and contain many valuable papers, with excellent illustrations of natural history.

Other important scientific societies are the Royal Zoological Society of New South Wales, inaugurated in 1879; a branch of the British Medical Association, founded in 1881; a branch of the British Astronomical Association; the Australian Association for the Advancement of Science; the Royal Geographical Society; the University Science Society; Australian Historical Society; and the Naturalists' Society of New South Wales.

All the learned professions are represented by associations or societies.

The Royal Art Society holds an annual exhibition of artists' work at Sydney; and of the many musical societies, mention may be made of the Royal Sydney Apollo Society, and the Royal Sydney Philharmonic Society.

#### WORKERS' EDUCATIONAL ASSOCIATION.

The Workers' Educational Association of New South Wales was founded at a conference called by the Labour Council of New South Wales in June, 1913, and since that date the new movement, despite vicissitudes of fortune, has grown considerably. Its main purpose is "to bring the mellowing influence of education into the Labour Movement," and its appeal is to workers of all degrees. In this endeavour it works in conjunction with other educational associations (particularly at the University) and with working-class organizations. It publishes a series of books on matters of local and general economic importance. In 1921 the membership of the association in New South Wales consisted of 201 individual members and 125 organizations, including 43 trade unions, were affiliated with it.

## CONSERVATORIUM OF MUSIC.

The State Conservatorium of Music, which was established in 1915, provides tuition in every branch of music, from the elementary to the advanced stages. The studies are divided into two sections; the Music School Section consists of three courses, viz., elementary, intermediate, and advanced—the last-mentioned extending over two years. A certificate is granted at the conclusion of each course. The advanced grade certificate of the Music School Section entitles the holders to admission to the Diploma Section, in which a course of two years' tuition, leading to the Professional Diploma, is given under the personal direction of the Director of the Conservatorium. A Preparatory Course in all subjects is available for juveniles who have not previously received musical tuition. The expenditure on salaries and scholarships during the year 1921 amounted to £12,842, but this amount was almost, if not entirely, covered by revenue from tuition fees and sundry receipts. During the year 1,581 students were enrolled, and this number taxes the resources of the building to its utmost capacity.

## MUSEUMS, LIBRARIES, AND ART GALLERIES.

Recognising that Museums, Libraries, and Art Galleries are powerful factors in promoting the intellectual wellbeing of the people, the Government of New South Wales has been active in founding and maintaining such establishments. The expenditure by the State on buildings for Museums, Libraries, and Art Galleries to 30th June, 1922, amounted to £423,026.

*Museums.*

The Australian Museum, the oldest institution of its kind in Australia was founded in Sydney in 1836 as a Museum of Natural History. In 1853 the Museum, till then managed by a committee, was incorporated under control of trustees, with a State endowment, which is now supplemented by annual Parliamentary appropriations. It contains fine specimens of the principal objects of natural history, and a valuable collection of zoological and ethnological specimens of distinctly Australian character. A fine library, containing many valuable publications, is attached to the institution. Lectures and gallery demonstrations are given in the Museum, and are open to the public. During the year 1921, visitors to the Museum numbered 224,881. The expenditure during the year was £13,976.

A Technological Museum was instituted in Sydney at the close of 1879, under the administration of a committee of management appointed by the trustees of the Australian Museum. The whole original collection of some 9,000 specimens was destroyed in 1882 by fire. Efforts were at once made to replace the lost collection, and in December, 1883, the Museum was again opened to the public. In 1890 it was transferred to the Department of Education, as an adjunct to the Technical College, and now contains a valuable series of specimens illustrative of various stages of manufacturing, and an excellent collection of natural products acquired by purchase, gift, loan, or exchange. Technological Museums are established also at Goulburn, Bathurst, West Maitland, Newcastle, and Albury.

Research work is conducted by the scientific staff of the Technological Museum in connection with the development of the natural vegetable resources of Australia, particularly in respect of the pines and eucalypts.

The functions of the Mining and Geological Museum include the preparation and collections of minerals to be used as teaching aids in schools and in other institutions.

The Agricultural and Forestry Museum is an adjunct of the Department of Agriculture.

The public have access to the "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History, the Museum of Normal and Morbid Anatomy, attached to the Sydney University, and the National Herbarium and Botanical Museum at the Botanic Gardens. Housed in the Macleay Museum is the Aldridge collection of Broken Hill minerals.

*Public Library of New South Wales.*

The Public Library of New South Wales was established, under the designation of the Free Public Library, on 1st October, 1869, when the building and books of the Australian Subscription Library, founded in 1826, were purchased by the Government. The books thus acquired formed the nucleus of the present Library. In 1890 the Library was incorporated with a statutory endowment of £2,000 per annum for the purchase of books.

The scope of the Public Library, which is essentially a reference institution, is extended by a loan system, under which, in 1921, 55,866 volumes were forwarded to country libraries, schools of arts, progress associations, light-houses, individual students in the country, associations of primary producers, and to Public School Teachers' Associations, and branches of the Agricultural Bureau.

In 1921 the Reference Department of the Public Library contained 248,983 volumes, including volumes for country libraries under the lending system. The attendance of visitors during 1921 numbered 206,982.

In 1899 Mr. David Scott Mitchell donated to the trustees of the Public Library a collection of 10,024 volumes, together with 50 valuable pictures, and at his death, in 1907, bequeathed to the State the balance of a unique collection, principally of books and manuscripts relating to Australasia, and containing over 60,000 volumes, and 300 framed paintings of local historic interest, valued at £100,000. He endowed the Library with an amount of £70,000, from which the income, amounting to about £2,750 per annum, is expended on books and manuscripts. In 1921 there were 107,021 volumes in the Mitchell Library, which is located in a separate building, opened in March, 1910. There were 18,763 visitors during the year.

The total cost to the State of the Public Library buildings was £28,957, and of the Mitchell Library £43,118. The expenditure on the Library during 1921 was £25,772.

*Sydney Municipal Library.*

The Sydney Municipal Library was formed by the transfer to the City Council in 1908-9 of the lending branch of the Public Library; it contained 37,964 volumes in 1921.

Maintenance costs during 1921 amounted to £11,226, made up as follows:—Salaries, &c., £6,024; books, periodicals, binding, and electric lighting, £5,202.

*Other Libraries.*

Local libraries established in more than 400 centres throughout the State, may be classed broadly under two heads—Schools of Arts, receiving an annual subvention in proportion to the amount of monetary support accorded by the public; and Free Libraries established in connection with municipalities. Under the provisions of the Local Government Act any shire or municipality may establish a public library, art gallery, or museum.

The library of the Australian Museum, though intended primarily as a scientific library for staff use, is accessible to students, and about 22,850 volumes may be found on the shelves.

The library in connection with the Technological Museum, at the Central Technical College, and its branches, contains approximately 8,500 text books.

The Parliamentary Library contains over 52,000 books, and large numbers of volumes are in the libraries of the Law Courts and Government Offices.

#### NATIONAL ART GALLERY OF NEW SOUTH WALES.

The National Art Gallery contains a good collection of paintings and statuary, including some works of prominent modern artists, and some valuable gifts from private persons; there is also a fine collection of water colours.

The present value of the contents of the Gallery is £162,000, and the cost of the building to 30th June, 1922, was £94,437.

The number of paintings, etc., in the Gallery at end of year 1921 was 2,357, and the total amount expended in purchasing works of art during that year was £2,513, distributed as shown below:—

Classification.	Paintings, etc., in Gallery.	Expenditure during year.
	No.	£
Oil Paintings ... ..	497	2,120
Water Colours ... ..	461	...
Black and White Works ... ..	747	242
Statuary, Casts, and Bronzes ... ..	177	79
Various Art Works in Metals, Ivory, Ceramics, Glass, Mosaic, etc. ... ..	475	72
Total ... ..	2,357	2,513

The attendance at the National Art Gallery during 1921 was, on week days 149,898, and on Sundays, 72,845.

Art students, under certain regulations, may copy any of the various works, and enjoy the benefit of a collection of books of reference on art subjects. In 1894 a system of loan exchanges between Sydney, Melbourne, and Adelaide was introduced, by which pictures are sent from Sydney to Melbourne and Adelaide and reciprocally, with results most beneficial to the interests of art. Since 1895 the distribution of loan collections of pictures to the principal country towns has been permitted for temporary exhibition, and 221 pictures were so distributed among twelve country towns during 1920.

The total disbursements in connection with the National Art Gallery during the year 1921 were £6,341.

The Gallery has received but small support from private endowments, and, consequent upon its limited funds, is restricted mainly to the collection of specimens of contemporary art.

The Wynne Art Prize was instituted in 1897, and consists of the interest on approximately £1,000, which is awarded annually to the Australian artist or sculptor producing the best landscape painting of Australian scenery in oils or water colours, or the best production of figure sculpture.

The Archibald Prize was instituted in 1921. It is a bequest in the estate of the late J. F. Archibald for the best portrait, 'preferably of some man or woman distinguished in art, letters, science, or politics painted by any artist resident in Australasia.' The value of the prize is approximately £400.

#### STATE EXPENDITURE ON EDUCATION.

Although the expenditure by the State on education rose steadily between 1901 and 1911, the recent expansion of the system has caused a very rapid increase in expenditure since that year, but more especially since 1919 on account of the substantial increases in salaries paid to teachers. Part of this additional expenditure has been occasioned by the increase in the number of scholars, but the cost of education per pupil has more than doubled since 1911. The total expenditure on primary and secondary schools since 1921

was £3,557,040. The following statement provides a comparison of the expenditure at intervals since 1891 : —

Year.	Maintenance and Administration.	School Premises.	Total Expenditure.	Per Pupil—Mean Quarterly Enrolment.		
				Maintenance and Administration	School Premises.	Total Expenditure.
	£	£	£	£ s. d.	£ s. d.	£ s. d.
1891	578,191	191,374	769,565	3 7 10	1 2 6	4 10 4
1901	703,974	57,663	761,637	3 6 2	0 5 5	3 11 7
1911	1,048,553	193,993	1,242,576	4 13 10	0 17 4	5 11 2
1917	1,656,950	242,383	1,899,333	5 17 2	0 17 2	6 14 4
1918	1,736,175	279,863	2,016,038	5 19 11	0 19 4	6 19 3
1919	1,971,211	299,038	2,270,249	6 16 5	1 0 9	7 17 2
1920	2,668,059	410,847	3,078,906	8 15 4	1 7 0	10 2 4
1921	3,227,245	329,795	3,557,040	10 4 2	1 0 11	11 5 1

Practically the whole increase in expenditure in recent years has been absorbed in maintenance administration, the capital expenditure having been so small as to give rise to a serious problem in providing school accommodation. In his annual report (1921) the Minister for Education estimated that "fully £1,500,000" was needed to perform essential and urgent work to relieve overcrowding in schools.

The following statement shows the distribution of expenditure in connection with primary and secondary schools in the three calendar years 1919 to 1921 :—

	1919. £	1920. £	1921. £
School Premises, Buildings, Repairs, Rates ... ..	299,038	410,847	329,795
Maintenance of Schools—			
Teachers' Salaries and Allowances	1,589,248	2,187,734	2,658,857
Travelling Expenses ... ..	15,298	18,865	23,328
Forage Allowances ... ..	4,223	5,720	4,999
School Fuel Allowances ... ..	2,853	3,341	4,202
Cleaning Allowances ... ..	49,070	62,753	71,302
Materials ... ..	44,158	59,881	85,036
Conveyance of Pupils to Central Schools ... ..	22,423	23,302	35,286
Miscellaneous Expenses ... ..	24,769	32,857	30,043
Training of Teachers ... ..	59,634	78,398	98,537
Bursary Endowment Board ... ..	42,608	56,436	58,068
Administration—			
General Management ... ..	61,189	79,001	87,419
Inspection ... ..	37,886	39,897	47,971
Chief Medical Officer's Branch ... ..	17,852	19,874	22,197
Total ... ..	£2,270,249	3,078,906	3,557,040

To estimate the total cost to the State of education in any one year would necessitate an investigation of the capital value of buildings and equipment and the allowance of a rate of depreciation, etc., and the addition in 1921 of the following items:—University grant, £129,512; Public Library (1921-1922), £25,772; Australian Museum, £13,976; National Art Gallery, £6,345; Sydney Grammar School, £1,500; Sydney Observatory, £6,218; Conservatorium of Music, £12,842; Technical Education, £129,851; and the expenditure by the Department of Agriculture on Hawkesbury Agricultural College and the training of students on experimental farms. In certain cases small amounts of revenue from fees, endowments, etc., should be deducted.

The insured value of all school properties of the Department of Education in May, 1922, was approximately £4,000,000. This value is based on valuations of buildings existing in 1912 and on the cost of buildings subsequently erected. It is, therefore, subject to a very large allowance for appreciation of values.

## PRIVATE FINANCE.

## CURRENCY.

THE currency in New South Wales is under the supervision of the Commonwealth Government. Matters relating to the metallic currency are administered in terms of the Coinage Act, 1909, and the paper currency is controlled by the Australian Notes Act and the Bank Notes Act passed in 1910.

An estimate of the face value of the currency of New South Wales at five-year intervals between 1901 and 1921 was published in the 1921 issue of this Year Book in the chapter relating to Valuation of Wealth, details being given regarding the sources of data and the method used in formulating the estimate. The following is a summary of the results :—

Currency.	1901.	1906.	1911.	1916.	1921.
	£000	£000	£000	£000	£000
Gold ... ..	8,007	9,795	14,496	11,006	8,637
Silver ... ..	729	831	1,302	1,513	2,150
Bronze ... ..	44	53	81	99	131
Total Metallic ...	8,780	10,679	15,879	12,618	10,918
Bank Notes ... ..	1,500	1,462	401	85	70
Australian Notes ...	...	...	3,866	18,991	21,668
Total Paper ... ..	1,500	1,462	4,267	19,076	21,738
Total Currency ...	10,280	12,141	20,146	31,694	32,656

The amount of metallic currency rose considerably between 1901 and 1911, and throughout the following decade the silver and bronze coinage continued to expand, while in the latter half the gold currency was withdrawn gradually from active circulation owing to war conditions. Bank notes were replaced by Australian notes after the enactment of Federal legislation in 1910, and the amount of paper currency increased fivefold between 1911 and 1921.

The distribution of the currency between the banks and the public is shown below. The amount of bank notes current and of the Australian notes held by banks were estimated from the statutory returns of the banks, and the value of Australian notes in the hands of the public was assumed to have been 40 per cent. of the amount so held in the Commonwealth.

Held by—	1901.	1906.	1911.	1916.	1921.
	£000	£000	£000	£000	£000
<b>Banks—</b>					
Gold ... ..	6,040	7,724	12,202	11,006	8,637
Silver ... ..	345	407	450	497	599
Bronze ... ..	10	12	15	17	26
Australian Notes ...	...	...	2,124	13,661	12,098
Total ... ..	6,395	8,143	14,791	25,181	21,360
<b>Public—</b>					
Gold ... ..	1,967	2,071	2,294	...	...
Silver ... ..	384	424	852	1,016	1,551
Bronze ... ..	34	41	66	82	105
Bank-notes ... ..	1,500	1,462	401	85	70
Australian Notes ...	...	...	1,742	5,330	9,570
Total ... ..	3,885	3,998	5,355	6,513	11,296
Total Currency ...	10,280	12,141	20,146	31,694	32,656

The amount held by the banks was more than doubled between 1901 and 1911, and expanded by 70 per cent. during the succeeding five years, then showed a tendency to decline. After 1911 the increase was in the amount of Australian notes, and the quantity of gold decreased considerably. Shortly after the commencement of the war an arrangement was made by which the banks placed gold at the disposal of the Government and accepted in exchange Australian notes redeemable at the end of the war. Moreover, the banks do not now require to hold gold against the issue of paper currency, the gold which is a reserve against the Australian notes having been held by the Treasury until December, 1920, and subsequently by the Note Issue Board.

The money in the hands of the public increased slowly between 1901 and 1916, then expanded rapidly during the succeeding quinquennium as prices and wages rose to an abnormal level. The increase in relation to the population is shown in the following table:—

Currency.	Money in active circulation per head of Population.				
	1901.	1906.	1911.	1916.	1921.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Gold ... ..	1 8 7	1 7 7	1 7 6	...	...
Silver ... ..	0 5 7	0 5 8	0 10 4	0 10 9	0 14 9
Bronze ... ..	0 0 6	0 0 7	0 6 9	0 0 10	0 1 0
Total Metallic ... ..	1 14 8	1 13 10	1 18 7	0 11 7	0 15 9
Paper ... ..	1 1 9	0 19 6	1 5 9	2 17 3	4 11 8
Total Currency ... ..	2 16 5	2 13 4	3 4 4	3 8 10	5 7 5

The average amount of money in active circulation per head of population in 1921 was twice the amount in 1906, and was 56 per cent. higher than in 1916.

#### COINAGE.

British or Australian gold coins are legal tender in New South Wales for the payment of any amount, silver coins up to forty shillings, and bronze up to one shilling.

A branch of the Royal Mint, London, was opened in Sydney on 14th May, 1855, for minting gold; other branches were opened subsequently in Melbourne (Victoria) and in Perth (Western Australia). The Commonwealth Coinage Act, 1909, empowers the Federal Treasurer to make and issue silver and bronze coins of specified denominations; a nickel coinage also was authorised, but it has not been issued.

For gold coins the standard fineness is  $\frac{11}{12}$  fine gold,  $\frac{1}{12}$  alloy, or millesimal fineness 916·6; for silver coins,  $\frac{37}{40}$  fine silver,  $\frac{3}{40}$  alloy, or millesimal fineness 925; bronze coins are of mixed metal—copper, tin, and zinc. Thus, standard or sovereign gold has a fineness of 22 carats, and the gold contained in deposits sent to the Sydney Mint for melting, assaying, and coining is accounted for at the rate of £3 17s. 10½d., or 3·8937 sovereigns per oz. Restrictions placed upon the export of gold during the war period were modified early in 1919 to allow export by an association of gold producers, and a substantial premium has been obtained as a result of sales abroad.

The nominal value of one ounce of silver coined into eleven sixpences is 5s. 6d., and of one pound (avoirdupois) of bronze coined into pence 4s., and into half pence 3s. 4d.

The denominations of Australian coins are similar to those of the Imperial coinage, the principal variation being the elimination of the half-crown.



Until 1919 gold coins only were struck at the Sydney Mint, the silver and bronze coins issued being minted elsewhere. As the gold production decreased and gold coins were withdrawn from circulation, arrangements were made for minting other coins, viz., bronze in May, 1919, and silver in January, 1921.

Coins and bullion are distributed from the Sydney Mint upon the order of the Federal Treasurer; the issues during the year 1921 included sovereigns to the value of £839,000, silver coins £127,700, bronze £11,869; 578,000 sovereigns were issued in 1922, silver coins to the value of £119,400, and bronze £8,209. Gold bullion is issued in the form of bars of fine gold for local banks, also small quantities of pure gold for industrial use, the quantity in 1921 being 3,620 oz., valued at £14,094, and in the following year 11,189 oz., valued at £43,568.

The value of gold coin and bullion issued by the Sydney Mint from the date of its establishment in 1855 to the end of 1922 was £148,873,819, viz., coin £141,743,500, and bullion £7,130,319. The value of Australian token coinage issued from 1910 to 1922 was £1,684,039, including silver £1,585,450, and bronze £98,589. Worn gold coins are received for re-coinage, the nominal value of those withdrawn from circulation to the end of 1922 being £1,084,381. British silver coins, worn and re-issuable, are withdrawn through the agency of the Mint, the aggregate value of the withdrawals to the end of 1922 being £1,007,072. No Australian coins have yet been withdrawn from circulation.

The coinage value of an ounce of silver being 5s. 6d., a substantial profit is usually made on the coinage, after the minting and other expenses have been deducted. Under normal conditions, the price of silver is determined by transactions in the London market, and the average of the prices ruling there in each year since 1912 is shown below:—

Year.	Price of Silver per standard oz.	Year.	Price of Silver per standard oz.
	s. d.		s. d.
1912	2 4-06	1917	3 4-93
1913	2 3-56	1918	3 11-77
1914	2 1-19	1919	4 10-31
1915	1 11-67	1920	5 1-21
1916	2 7-28	1921	3 0-90

In 1918 the price of silver in London was subject to regulation by the Imperial Government; it was decontrolled in May, 1919, and in the latter part of the year it commenced to rise rapidly until it exceeded the coinage value. The maximum was realised in February, 1921, when the average price for the month was 7s. 6d. per oz.; four months later it had fallen to 4s. 3d. At the beginning of 1921 it was 3s. 4d. per oz., and it fluctuated between 2s. 8½d. and 3s. 5½d. before the close of the year, when the price was 2s. 11¾d. per oz.

Though the Sydney Mint is a branch of the Imperial institution and the coinage is under the control of the Commonwealth, the cost of maintenance is borne by the State Government and the receipts are paid into the Consolidated Revenue of New South Wales, in accordance with arrangements subsisting at the inauguration of the Commonwealth. A statutory endowment of £15,000 is set apart annually and additional appropriations are made when necessary. The receipts consist of charges for coining, fees for assaying, etc., and profits on the sale of silver; the Mint retains the silver contained in deposits, but payment is made for the quantity in excess of 8 per cent. of the gross weight at a rate determined by the Deputy Master, the price being fixed at 2s. 6d. per oz. on 3rd February, 1921, and at 2s. on

1st January, 1923. The profit in respect of the issue of Australian silver and bronze coinage accrues to the Federal Government.

The disbursements by the State Government during 1921 amounted to £19,289, and the receipts to £10,396, the net loss being £8,893; the corresponding figures for 1922 being, expenditure £20,298, receipts £14,853, and net loss £5,445. The expenditure by the State Government in connection with the Mint has exceeded the receipts paid into Consolidated Revenue in each year since 1907, except in 1918 when the Mint charges yielded a larger amount than usual as the result of the treatment of large consignments of gold from overseas.

#### PAPER CURRENCY.

##### *Bank Notes.*

Prior to 1910 the right to issue paper currency in New South Wales was vested in private banking institutions which had acquired the right by Royal charter or by special Act of Parliament, the bank notes being subject to a tax of 2 per cent. per annum imposed by the State. In 1910 the Federal Parliament, having authorised the issue of Australian notes, imposed a tax of 10 per cent. on the notes of the trading banks, with the object of forcing them out of circulation. Consequently the value of the bank notes current dropped from £2,213,128 in December quarter, 1910, to £400,784 in the following year. In June quarter, 1922, the amount was £68,953.

##### *Australian Notes.*

The Australian Notes Act, 1910, passed by the Commonwealth Parliament, prohibited the circulation of notes by any of the States and authorised the Federal Treasurer to issue Australian notes, in denominations of 10s., £1, £5, £10, and multiples of £10, to be legal tender throughout the Commonwealth and to be payable on demand at the seat of Federal Government. Five-shilling notes were authorised but have not been issued. The gold reserve in respect of the notes was fixed at an amount not less than one-fourth of the notes issued up to £7,000,000, and £ for £ in excess of that amount, but in the following year the Act was amended and the reserve was fixed at one-fourth of the issue.

In December, 1920, control of the Australian note issue was transferred to the Commonwealth Bank in which a Note Issue department was established under the management of a Board, consisting of the Governor of the Bank as chairman, and three other directors appointed by the Governor-General, one being an officer of the Commonwealth Treasury. Since the transfer the notes have been issued by the Commonwealth Bank.

The total value of the Australian notes in circulation in New South Wales and elsewhere, and the gold reserve, in each year since 1914, are shown below:—

Year ended June.	Notes in Circulation.	Gold Reserve.	
		Total.	Proportion of Note Circulation.
	£	£	Per cent.
1914 ... ..	9,573,738	4,106,767	42·90
1915 ... ..	32,128,302	11,034,703	34·34
1916 ... ..	44,609,546	16,112,943	36·12
1917 ... ..	47,201,564	15,244,592	32·29
1918 ... ..	52,535,959	17,659,754	33·61
1919 ... ..	55,567,423	24,273,622	43·68
1920 ... ..	56,949,030	23,658,092	41·54
1921 ... ..	58,225,787	23,478,128	40·32
1922 ... ..	53,556,698	23,534,181	43·94

Of the notes current in June, 1922, the banks held £30,953,250, and £22,603,448 were in the hands of the public; in comparison with the figures for the previous year there was a reduction of £4,338,212 in the banks' holdings, and of £330,877 in the notes in active circulation.

The value of the gold reserve is far above the proportion, 25 per cent., required by law, the excess in 1922 being £10,145,007.

#### *Money Orders and Postal Notes.*

Exchange by means of money orders and postal notes is conducted by the Post Office. The maximum amount which may be transmitted by a single money order is £20, if the place of payment is within the Commonwealth; to places outside the Commonwealth the maximum is £20 or £40, as fixed by arrangement with the country concerned. The following table gives particulars of the money orders issued and paid in New South Wales during the last five years:—

Year ended 30th June.	Money Orders issued in New South Wales for payment in—				Money Orders issued elsewhere, paid in New South Wales.		
	New South Wales.	Other Australian States.	Other Countries.	Total.	In other Australian States.	Beyond the Commonwealth.	Total.
	£	£	£	£	£	£	£
1918 ...	3,835,268	454,258	305,863	4,595,389	554,149	190,421	744,570
1919 ...	4,088,483	477,915	278,323	4,844,721	611,033	208,825	819,858
1920 ...	4,338,224	532,745	364,440	5,235,409	720,392	268,714	989,106
1921 ...	4,809,290	605,471	414,997	5,829,758	806,808	294,479	1,101,287
1922 ...	5,096,806	683,111	352,591	6,132,508	779,264	251,534	1,030,798

The amount of the money orders issued in other Australian States for payment in New South Wales exceeds the amount sent from this State, but in the international money orders the balance is against New South Wales.

The maximum amount for which a single postal note is issued is £1, and particulars regarding them are shown below:—

Year ended 30th June.	New South Wales Postal Notes paid in—			Postal Notes of other Australian States paid in New South Wales.
	New South Wales.	Other Australian States.	Total.	
	£	£	£	£
1918 ...	1,090,582	307,054	1,397,636	122,419
1919 ...	1,110,501	239,956	1,400,457	117,422
1920 ...	1,141,341	327,033	1,468,374	152,295
1921 ...	1,210,980	352,244	1,563,224	138,142
1922 ...	1,296,463	348,809	1,645,272	150,578

The amount of money sent by postal notes to the other States is nearly three times the aggregate value of the interstate postal notes paid in New South Wales. This method of transmitting small sums is used extensively for the purchase of shares in lotteries conducted in other States, of which the sale in New South Wales is prohibited.

#### BANKS.

Institutions which transact banking business are required under the Banks and Bank Holidays Act to furnish in a prescribed form, quarterly statements of their assets and liabilities; also, when required, to furnish

special returns under the Census Act of 1901. From these returns, and from the periodical balance-sheets issued by the banking companies, the information contained in the following tables has been prepared.

The banking institutions which transact ordinary business in New South Wales are sixteen in number. The head offices of five are in New South Wales, of three in Victoria, of one in Queensland, of one in South Australia, and of one in New Zealand. Three banks have head offices in London; and there are two foreign banks with headquarters in France and Japan respectively.

#### *Capital and Profits.*

The particulars relating to the capital and profits of the banks, as shown below, are exclusive of figures relating to four institutions, viz., the Commonwealth Bank, which has no share capital as the Federal Government is responsible for its liabilities, the Rural Bank, which is an adjunct to the State Government Savings Bank, and the French and Japanese banks, whose transactions in New South Wales represent only a very small proportion of their total business.

The following table shows the amount of the paid-up capital of the other institutions doing business in the State, and the reserve funds, exclusive of balances of profit and loss accounts, at intervals since 1895. The paid-up capital represents the total amount contributed to the banks, irrespective of the countries in which it was subscribed.

Year.	Banks.	Capital Paid up.	Reserve Funds.	Year.	Banks.	Capital Paid up	Reserve Funds.
		£	£			£	£
1895	13	19,704,957	4,175,912	1915	15	18,891,145	12,984,000
1900	13	16,807,069	4,529,109	1920	14	22,944,369	17,410,000
1905	13	13,965,931	5,474,199	1921	13	27,040,769	17,455,000
1910	15	16,193,550	8,462,235	1922	12	28,714,943	19,177,964

During the first decade of the period under review the capital of some of the banks was written down. Between 1905 and 1910 two new institutions commenced operations in New South Wales and the capital of the existing banks was increased by calls on the shareholders; the increase has continued, £5,770,574 having been added during the last two years. The reserve funds were built up steadily between 1905 and 1920; during 1921 there was only a slight increase, but in the following year the reserves were augmented by £1,722,964. The reduced number of banks since 1915 is due to amalgamations.

The amount of dividend paid during 1895 and subsequent years by the banks to which the preceding table relates is shown below, also the average rate per cent. of dividend in relation to paid-up capital and reserves, including profits carried forward:—

Particulars.	1895.	1905.	1915.	1920.	1921.	1922.
	£	£	£	£	£	£
Amount of dividend paid during year ...	540,409	893,288	1,773,232	2,299,379	2,735,923	2,887,692
Average rate per cent per annum...	2.22	4.44	5.32	5.39	5.99	5.71

In 1895 the banks had not recovered from the effects of the financial crisis of 1893; some did not pay a dividend, and others paid on preferential shares only, consequently the average rate was very low. Ten years later, conditions had

improved greatly, and the banks were able to allocate a substantial sum to reserves, and to distribute a large portion of their profits, the average rate of dividend being twice as great as in 1895. The financial position showed further improvement during the next decade, and in 1915 dividends represented about  $5\frac{1}{2}$  per cent. of capital and reserves, though the total reserve funds had been more than doubled during the period. The rate of dividend was about the same in 1920, and rose to nearly 6 per cent. in 1921, notwithstanding heavy increases in costs and expenses of management. In 1922 there was a slight decline in the average rate of dividend.

*Liabilities within New South Wales.*

The following statement shows the average liabilities of all the banks within New South Wales, exclusive of those to shareholders. Up to 1905 the figures for December quarter are given; from 1910 onward those for June quarter are shown, and since 1915 the interest-bearing deposits include savings banks deposits in the Commonwealth Bank of Australia:—

Year.	Notes.	Deposits.			Other Liabilities.	Total Liabilities within N.S.W.
		At Interest.	Without Interest.	Total Deposits.		
	£	£	£	£	£	£
1890	1,503,404	25,114,127	9,932,310	35,046,437	278,792	36,828,633
1895	1,223,864	20,406,822	10,222,437	30,629,259	183,929	32,037,052
1900	1,447,641	20,009,081	12,224,510	32,233,591	288,499	33,969,731
1905	1,430,335	22,211,627	14,859,427	37,071,054	353,673	38,860,062
1910	1,801,807	26,642,873	23,512,712	50,155,585	471,233	52,428,625
1915	95,505	35,031,367	33,186,317	68,217,684	1,655,801	69,968,990
1920	73,268	50,495,134	52,878,126	103,373,260	2,562,273	106,008,799
1921	71,654	54,631,451	53,044,965	107,676,416	3,661,412	111,409,482
1922	68,953	54,036,297	52,276,678	106,362,975	2,511,109	108,943,037

The decline in the value of bank notes in circulation is the result of their replacement by Australian notes. The remarkable growth of deposits since 1915 reflects the large war expenditure and increases in prices.

*Assets within New South Wales.*

The following table shows the average assets within New South Wales of all banks operating in the State; in order to institute a comparison between the figures of the various banks, necessary adjustments have been made by excluding from the assets the balances due from branches and agencies outside New South Wales:—

Year.	Coin, Bullion, and Australian notes.	Advances.	Landed Property.	Other Assets.	Total Assets within N.S.W.
	£	£	£	£	£
1890	5,659,057	41,623,049	1,601,589	2,796,100	51,679,795
1895	7,516,278	35,707,153	1,919,017	479,881	45,622,329
1900	6,126,126	34,385,388	1,874,099	650,814	43,036,427
1905	8,823,260	32,447,659	1,799,231	623,987	43,694,137
1910	12,980,593	37,482,907	1,824,349	1,014,456	53,302,305
1915	22,102,401	51,379,741	2,108,633	1,807,112	77,397,887
1920	23,484,721	89,063,144	2,477,601	4,246,969	119,272,435
1921	21,964,366	104,709,314	2,573,628	3,186,625	132,433,933
1922	20,794,662	98,335,071	2,620,237	3,625,187	125,375,157

The experience of the financial institutions during the early nineties caused the banks to exercise caution and the aggregate amount of advances declined during the years 1890 to 1905, while the amount of coin and bullion showed an upward tendency. The advances increased rapidly after 1914, with the inflation of the currency and rising prices, as producers and traders required a larger amount of help in proportion to the volume of business. Another reason for the increase lies in the fact that the banks undertook various forms of advances to meet special emergencies arising from war conditions, e.g., assistance to enable customers to invest in war loans, and advances in connection with the marketing of staple products.

During the period of trade activity and excessive importations in 1920-21, advances rose to a maximum, the aggregate being more than twice the amount in 1915; in the following year advances in respect of war loans and wheat declined, traders were forced to reduce their overdrafts, and the import trade diminished, consequently the total amount of advances declined by £6,364,000.

The increase in the assets grouped as coin, bullion, and Australian notes since 1910 is due to increased holdings of notes, which ranged from less than £2,000,000 in 1914 to £13,000,000 in 1920, and has since declined. The amount of coin and bullion was unusually high in 1914, viz., £15,500,000 sterling; it declined by £3,500,000 during the next two years, and a downward tendency was apparent until 1921 when the amount was about £10,000,000. The values in 1922 were coin £10,282,955, bullion £335,043, and Australian notes £10,176,664. The value of the assets grouped under the heading "Other Assets" fluctuates with variations in the amount of balances due from other banks.

The proportion of reserves which banking institutions should keep constantly on hand is not fixed by any enactment, and consequently it varies considerably. The ratios of coin, bullion, and Australian notes for various periods from 1890 are shown below:—

Year.	Proportion of Coin, Bullion, and Australian Notes—		Year.	Proportion of Coin, Bullion, and Australian Notes—	
	To Total Liabilities.	To Deposits at Call and Note Circulation.		To Total Liabilities.	To Deposits at Call and Note Circulation.
	per cent.	per cent.		per cent.	per cent.
1890	15·4	49·5	1915	28·6	66·4
1895	16·5	34·7	1920	19·7	44·4
1900	18·0	44·8	1921	19·7	41·3
1910	24·8	51·3	1922	19·1	39·7

The ratio of reserves to total liabilities rose steadily from 15·4 per cent. in 1890 to 28·6 per cent. in 1915; then, as the banks were called upon to meet a heavy demand for accommodation, the ratio fell below 20 per cent. A similar movement is noticeable between 1895 and 1922 in the relation between reserves and deposits at call.

The financial conditions in the later years, however, were dissimilar from those of the nineties, when the advances made by the banks were considerably in excess of deposits, whereas during the last twenty years a considerable margin of deposits has been maintained.

*Deposits and Advances.*

Under the head of advances are included notes and bills discounted, and all other debts due to the banks. The bulk of the advances are secured by the mortgage of real estate, or by the deposit of deeds over which the lending institutions acquire a lien, but the extent to which trade bills are discounted is not disclosed. The following table shows the ratio of advances to deposits, and to total assets, at various dates from 1890 :—

Year.	Deposits.	Advances.	Ratio of Advances to Deposits.	Advances per cent. of Total Assets.	Amount of Advances per head of popu- lation.
	£	£	per cent.		£ s. d.
1890	• 35,046,437	41,623,049	118·8	80·5	37 2 0
1895	30,629,258	35,707,153	116·6	78·3	28 5 9
1900	32,233,591	34,385,388	101·2	79·9	25 4 0
1905	37,071,054	32,447,659	87·5	74·3	22 1 9
1910	50,155,585	37,482,907	74·7	70·3	23 4 6
1915	68,217,684	51,379,741	75·3	66·6	27 3 0
1920	103,373,260	89,063,144	86·2	74·7	43 0 10
1921	107,676,416	104,709,314	97·2	79·1	49 15 0
1922	106,362,975	98,335,071	92·4	78·4	45 14 11

The amount of advances, which in 1890 showed an excess of 19 per cent. over deposits, was reduced steadily until 1905. Meanwhile, deposits increased with the development of the primary industries and of the external trade of the State, so that the ratio of advances to deposits dropped to 87·5 per cent. During the prosperous years which preceded the war, advances increased but not to the same extent as deposits, and the ratio declined to about 75 per cent. During the war period, banking transactions increased to a remarkable degree, but, despite the heavy strain upon the financial resources of the community, the margin of deposits did not fall below 25 per cent. until 1918. Then the demand for financial assistance became more insistent; the Government was negotiating war loans locally, and the primary producers were in need of assistance to combat the ravages of drought; under these conditions the ratio of advances to deposits rose steadily. The inrush of imports in 1920-21 placed a further strain upon the banks, and though efforts were made to restrict credit without unduly hampering trade and industry, the ratio of advances rose to 97 per cent. before the effect of restrictive measures became evident, and in 1922 the relation between advances and deposits showed a marked improvement.

A classification of accounts according to the amount of deposit at or about 30th June, 1922, is shown below, the figures being exclusive of particulars of the Commonwealth Bank, which are not available. The absence of these particulars probably does not affect the table seriously, as the bulk

of the accounts, both current and fixed, in the Commonwealth Bank consists of large amounts, deposited by the Governments of the Commonwealth and of three of the States.

Classification.	Current Accounts.		Fixed Deposit Accounts.		Current and Fixed Deposit Accounts.	
	Number.	Amount at Credit.	Number.	Amount at Credit.	Number.	Amount at Credit.
		£		£		£
£200 and under ...	155,407	7,220,495	21,331	2,676,893	176,768	9,897,388
£201- £500 ...	21,228	6,578,443	15,543	5,656,418	36,771	12,234,861
£501- £1,000 ...	8,578	5,912,484	9,048	7,069,436	17,626	12,981,920
£1,001- £2,000 ...	3,842	5,335,555	3,600	5,380,271	7,442	10,715,826
£2,001- £3,000 ...	1,137	2,735,671	916	2,375,668	2,053	5,111,339
£3,001- £4,000 ...	498	1,710,987	336	1,238,131	834	2,949,118
£4,001- £5,000 ...	263	1,174,014	452	2,211,247	715	3,385,261
£5,001-£10,000 ...	467	3,138,464	467	3,798,907	934	6,937,371
£10,001-£15,000 ...	121	1,454,589	93	1,190,719	214	2,645,308
£15,001-£20,000 ...	55	983,270	50	951,948	105	1,935,218
Over £20,000 ...	86	7,748,562	114	10,008,335	200	17,756,897
Total ...	191,682	43,992,534	51,980	42,557,973	243,662	86,550,507

Eighty-eight per cent. of the accounts and 25 per cent. of the deposits were held in respect of those with balances not exceeding £500; accounts of £2,000 and under represented 98 per cent. of the total accounts and 53 per cent. of the deposits, 47 per cent. of the aggregate amount of the deposits being held in 2 per cent. of the accounts. Small deposits were more numerous in current accounts, as persons wishing to place small sums of money at interest generally avail themselves of the facilities offered by the savings banks. The number of accounts does not by any means represent the number of persons who have money in the banks.

The proportion of accounts and of deposits in each group are shown below :—

Classification.	Proportion of Accounts in each Group.			Proportion of Deposits in each Group.		
	Current Accounts.	Fixed Deposit Accounts.	Total.	Current Accounts.	Fixed Deposit Accounts.	Total.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
£200 and under ...	81.1	41.1	72.6	16.4	6.3	11.4
£201- £500 ...	11.1	29.9	15.1	15.0	13.3	14.1
£501- £1,000 ...	4.5	17.4	7.2	13.4	16.6	15.0
£1,001- £2,000 ...	2.0	6.9	3.1	12.1	12.6	12.4
£2,001- £3,000 ...	.6	1.8	.8	6.2	5.6	5.9
£3,001- £4,000 ...	.2	.6	.3	3.9	2.9	3.4
£4,001- £5,000 ...	.1	.9	.3	2.7	5.2	3.9
£5,001-£10,000 ...	.2	.9	.4	7.1	8.9	8.0
£10,001-£15,000 ...	.1	.2	.1	3.3	2.8	3.1
£15,001-£20,000 ...	}	.1	}	2.3	2.3	2.3
Over £20,000 ...		.2		17.6	23.5	20.5
Total ...	100	100	100	100	100	100

#### *Banks' Exchange Settlement.*

The Banks' Exchange Settlement Office was established in Sydney on the 18th January, 1894, and exchanges are effected daily between the banks.



The results of the operations are notified to the secretary of the Banks' Exchange Settlement, who notifies each institution daily of the amount of its credit with the "pool," and it is not permissible for the balance of any bank to remain below 25 per cent. of the fixed contribution. In the event of it reaching this margin, the bank is required to make up the deficiency with gold.

The growth in the volume of exchanges is shown in the following table:—

Year.	Amount of Exchanges.	Year.	Amount of Exchanges.
	£		£
1895	108,509,860	1920	764,546,357
1900	144,080,314	1921	709,734,554
1910	274,343,666	1922	726,532,809
1915	357,803,425		

The transactions have grown rapidly and reached a maximum in the year 1920, when prices were at the highest level. In the following year, notwithstanding a bounteous wheat harvest, there was a shrinkage amounting to 7 per cent., due mainly to lower prices. In 1922 there was an increase of 2 per cent.

*Interest, Discount, and Exchange Rates.*

The interest on fixed deposits during 1922 was 4 per cent. for sums deposited for six months; for twelve months' deposits the rate was  $4\frac{1}{2}$  per cent., and for two years 5 per cent. Under normal conditions the rate of interest paid on fixed deposits is uniform for all banks, and discount and overdraft rates fluctuate with the interest paid to depositors.

The bank exchange rate on London, at sixty days' sight, is on the average about 1 per cent., but it is subject to some variations.

The interest rates allowed on deposits for twelve months, and charged on overdrafts, also the discount and exchange rates at intervals from 1890 to 1922 were as follow:—

Year.	Bank Rates of Interest.		Bank Discount Rates.		Exchange Rate on London at 60 Days' Sight.	
	Allowed on Deposits for Twelve Months.	Charged on Overdrafts.	Bills at Three Months.	Bills over Three Months.	Buying.	Selling.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
1890	$4\frac{1}{2}$	9	7	8	99 $\frac{3}{4}$ to 100	100 $\frac{3}{4}$ to 101 $\frac{3}{4}$
1900	3	6 to 7	5 to $5\frac{1}{2}$	$5\frac{1}{2}$ to $6\frac{1}{2}$	98 $\frac{3}{4}$ „ 99 $\frac{1}{2}$	100 $\frac{1}{2}$ „ 100 $\frac{3}{4}$
1910	3	6 „ $7\frac{1}{2}$	5 „ 6	6 „ 7	98 $\frac{3}{4}$ „ 99	99 $\frac{3}{4}$ „ 99 $\frac{1}{2}$
1915	$3\frac{1}{2}$ to 4	6 „ 8	5 „ 6	6 „ 7	98 $\frac{3}{4}$ „ 99 $\frac{1}{2}$	100 $\frac{1}{2}$ „ 100 $\frac{3}{4}$
1920	4 to $4\frac{1}{2}$	6 „ 8	5 „ 6	6 „ 7	98 „ 99 $\frac{1}{2}$	99 $\frac{3}{4}$ „ 100 $\frac{1}{2}$
1921	$4\frac{1}{2}$	6 „ 8	5 „ 6	6 „ 7	98 $\frac{3}{4}$ „ 99 $\frac{1}{2}$	100 $\frac{3}{4}$ „ 100 $\frac{1}{2}$
1922	$4\frac{1}{2}$	6 „ 8	5 „ 6	6 „ 7	97 $\frac{3}{4}$ „ 99	99 $\frac{3}{4}$ „ 100 $\frac{1}{2}$

Since 1920, interest rates have shown a tendency to rise, and overdraft rates, while keeping within a range of from 6 to 8 per cent., were moved upwards by some of the banks in order to check borrowing, in view of the expansion of advances. As the oversea export trade of New South Wales consists mainly of products of rural industries, the volume of trade varies with the seasons, and the exchange rate on London is liable to fluctuate accordingly.

*The Commonwealth Bank of Australia.*

The Commonwealth Bank of Australia was established under an Act passed in 1911, by the Federal Parliament, and the Commonwealth is

responsible for the payment of all moneys due by the bank. The Act confers on the bank authority to conduct general banking business, to exercise the functions of an ordinary bank of issue and to transact savings bank business. The management is entrusted to a governor who, with a deputy-governor, is appointed for a term of seven years and is eligible for reappointment; the affairs of the bank are subject to audit and inspection by the Auditor-General of the Commonwealth. The capital was fixed by the 1911 Act at £1,000,000 to be raised by the issue and sale of debentures, but no debentures have been issued though the amount authorised was raised to £10,000,000 in 1914 by an amending Act which also empowered the bank to take over the business of banking corporations and of State savings banks.

The Commonwealth Bank commenced operations on 15th July, 1912, by the opening of a savings bank department but ordinary banking business was not commenced until 20th January, 1913. The head office is in Sydney, and branches have been established in the principal cities and towns of Australia, in London, and in the territory of New Guinea, savings bank business being transacted at all the branches and at numerous post offices and agencies throughout Australia, Papua, New Guinea, the Solomon and other Pacific Islands.

While the control of the Australian note issue was in the hands of the Federal Treasurer, the bank was not allowed to issue bank notes, but in 1920 the note issue was placed under the management of a department of the bank which is separate from other departments, the figures relating to the bank, as shown in this section being exclusive of particulars of the transactions in connection with the note issue.

The total liabilities and assets of the bank at 30th June, 1913, amounted to £5,055,382, and at 30th June, 1922, they had increased to £86,995,780, excluding those of the Note Issue department; the aggregate net profit earned up to the latter date was £4,001,659, of which £3,577,317 were credited to the general bank and £424,342 to the savings bank department.

The following statement shows the liabilities and assets of the Commonwealth Bank in New South Wales in the June quarter of each of the last five years:—

Particulars.	1918.	1919.	1920.	1921.	1922.
	£	£	£	£	£
<b>Liabilities—</b>					
Deposits at interest—					
Savings Department	4,237,590	5,139,350	5,296,606	6,308,826	6,879,637
Ordinary ... ..	2,456,097	6,309,694	8,890,139	7,477,994	4,466,546
Deposits without interest...	10,628,957	7,951,358	7,940,199	7,957,402	8,056,573
Total deposits ...	17,322,644	19,400,402	22,126,944	21,744,222	19,402,756
Other liabilities ... ..	346,465	386,370	119,409	176,645	34,216
Total Liabilities ...	17,669,109	19,786,772	22,246,353	21,920,867	19,436,972
<b>Assets—</b>					
Coin and Bullion ... ..	1,327,363	1,117,214	801,713	559,052	898,539
Australian Notes ... ..	4,502,707	4,852,941	1,319,167	1,618,772	1,652,075
Advances ... ..	13,537,531	18,112,713	18,938,721	21,855,509	20,754,495
Landed Property ... ..	317,495	285,261	303,336	335,054	310,461
Other Assets ... ..	1,539,918	3,357,828	1,994,964	1,646,467	1,790,806
Total Assets ... ..	21,225,014	27,725,957	23,357,901	26,014,854	25,406,376

## SAVINGS BANKS.

Savings bank business in New South Wales is conducted by the Government Savings Bank and by the Commonwealth Bank, and extensive use is made of the facilities offered for the accumulation of small sums on which interest is paid, the deposits being used by the banks to promote the progress and development of the State.

*The Government Savings Bank of New South Wales.*

This institution was established in 1871 as a post office savings bank under the administration of the Postmaster-General; when the post office was transferred to the Commonwealth in 1901 the control of the bank was vested in the State Treasurer, but the use of the post offices for savings bank business was continued until 1912 under agreement with the Federal Government. Upon the establishment of the Commonwealth Bank, the State institution had to withdraw its agencies from the post offices and to establish separate branches and agencies.

In January, 1907, a change was made in administration, and the bank, being detached from the direct control of the Treasurer, was placed under the management of three Commissioners, who were authorised to conduct the savings bank and to take over the State business in connection with loans to landholders transacted previously by the Advances to Settlers Board. Each class of business was confined to a separate department and new departments were created subsequently, viz., the Closer Settlement Promotion Department, in terms of an Act passed in 1910, which authorised the bank to finance intending settlers out of the proceeds of debentures issued under Government guarantee by the Advance Department; and, in 1914, departments to lend money on the mortgage of irrigation farm leases, and to make advances to enable persons to acquire homes. The work of the Closer Settlement Department was transferred to the Department of Lands as from 1st July, 1919.

The importance of the Savings Bank Department was increased in 1914 by reason of the absorption of the Savings Bank of New South Wales, a smaller institution which had been established in 1832, and controlled by trustees nominated by the Government. The amalgamation took place on 1st May, 1914, the assets taken over by the Government bank being valued at £9,345,952; the deposits amounted to £8,835,266, and the depositors, numbering 150,838, were given the right under certain conditions to continue their accounts for a period of ten years, and to receive a slightly higher rate of interest than the depositors in the Government Savings Bank, if the latter became less than  $3\frac{1}{2}$  per cent.

In 1921 the scope of the bank was enlarged in terms of an amending Act passed in the previous year; the departments dealing with advances to settlers and to irrigation farmers were reorganised as the Rural Bank Department, and the business of the institution is conducted now in three separate departments, viz., the Savings Bank, the Rural Bank, and the Advances for Homes.

In the Savings Bank Department the Commissioners may receive deposits and pay interest thereon at rates fixed by regulation, and they must hold 20 per cent. of the funds at call or short notice. In the Rural Bank the Commissioners are authorised to conduct the business of a rural bank and, with the approval of the Governor, they may extend the operations to include general banking business. The main purpose of the Rural Bank being to afford financial assistance to rural settlement and development, the Commissioners may grant advances on approved security to persons engaged in primary industries.

The following statement shows the loans current in each department of the bank at the end of the last five years :—

30th June.	Savings Bank.	Rural Bank.	Advances for Homes.	Total Loans by Government Savings Bank.
	£	£	£	£
1918	2,263,279	2,544,054	983,160	5,790,493
1919	2,113,188	2,599,751	1,415,635	6,128,574
1920	1,929,974	2,903,885	2,176,583	7,010,442
1921	2,219,908	3,423,871	3,173,751	8,817,530
1922	2,177,973	4,525,374	4,223,505	10,926,852

Figures relating to the ordinary banking business transacted by the Rural Bank are included in the tables relating to trading banks in this chapter and further particulars relating to loans to farmers, etc., and to the advances for homes are published in other parts of the volume.

On 30th June, 1922, there were 153 branches and 520 agencies of the Government Savings Bank, and, under reciprocal arrangements, transfers may be made on behalf of depositors between the bank and similar institutions in other States of the Commonwealth and the Post Office Savings Banks of the United Kingdom and New Zealand.

The liabilities of the Savings Bank Department, as at 30th June, 1922, amounted to £55,411,449; including deposits £54,581,592; reserve fund £650,000; balance of profit and loss account £29,019; and other liabilities £150,838. The investments on behalf of the bank included Government securities and municipal loans £32,910,505, inscribed stock of the other departments of the bank £8,319,193, fixed deposits in banks and in the Treasury £8,153,143, and loans on mortgages and contracts of sale £2,177,973. The cash in hand and bank and Treasury deposits at call and short notice amounted to £2,663,312; bank premises, £900,000; other assets, £287,323. The expenses of management during the year 1921-22 amounted to £273,715 or 10s. 2½d. per cent. of average funds, as compared with 10s. 11d. during the preceding year.

#### *Deposits in Savings Banks.*

During the year ended 30th June, 1922, the rate of interest paid by the Government Savings Banks on deposits was 4 per cent. on balances up to £500, and 3½ per cent. on any excess up to £1,000; on accounts of friendly societies, trade unions, and other associations not conducted for profit or trade, interest was allowed at 4 per cent. up to £1,000, and 3½ per cent. on any excess. The amount of deposits received during the year was £50,403,855, and a sum of £1,922,753 was added as interest; the withdrawals amounted to £48,547,153, and the balance at credit at the end of the year was £54,581,592 held in 961,589 accounts. An amount of £10,587,596, or 19·4 per cent. of the total deposits, was held in accounts not exceeding £100; £28,947,511, or 53 per cent., in 133,310 accounts between £100 and £500; and £15,046,485, or 27·6 per cent., in 22,821 accounts over £500. The Commonwealth Bank in its savings bank department accepts deposits and pays interest at the rate of 3½ per cent. up to £1,000 and 3 per cent. on

any additional balance up to £300. The number of accounts in New South Wales as at 30th June, 1922, was 225,359, the amount at the credit of the depositors being £7,209,681.

The following statement shows the number of accounts and the amount of deposits in the savings banks in New South Wales at the end of each financial year since 1913 :—

At 30th June.	Number of Accounts.	Amount of Deposits.		
		Total.	Per Account.	Per head of Population.
		£	£ s. d.	£ s. d.
1913	647,124	29,568,282	45 13 10	16 5 0
1914	717,737	33,167,523	46 4 3	17 13 11
1915	755,835	35,562,649	47 1 0	18 16 1
1916	806,882	37,363,272	46 6 1	19 14 10
1917	872,351	40,836,747	46 16 3	21 8 8
1918	920,337	43,039,012	46 15 3	22 3 1
1919	984,951	47,070,342	47 15 9	23 11 3
1920	1,053,893	49,933,535	47 7 9	24 2 8
1921	1,126,157	57,394,441	50 19 4	27 5 8
1922	1,186,948	61,791,273	52 1 2	28 14 9

The number of accounts does not represent individual depositors, as a certain amount of duplication is caused by persons having deposits in both banks, and by the inclusion of accounts of societies, of trusts, etc. whose members have personal accounts also. It is apparent, nevertheless, that a very large proportion of the people practice thrift through the medium of the savings banks. The aggregate amount of deposits has increased twofold during the last ten years. Notwithstanding the inflation of the currency, the average amount per deposit did not vary greatly until 1920 when an upward tendency became evident; the average amount per head of population rose steadily throughout the decennium.

The number of accounts and the amount of deposits in the savings banks of Australia is shown in the following table :—

State.	Accounts.	Amount of Deposits.	Average Amount.	
			Per Account.	Per Head of Population.
		£	£ s. d.	£ s. d.
New South Wales ...	1,186,948	61,791,273	52 1 2	28 14 9
Victoria ... ..	1,127,892	52,131,032	46 4 5	33 3 10
Queensland ... ..	337,621	19,394,156	57 8 10	24 13 10
South Australia... ..	414,570	16,931,678	40 16 10	33 10 6
Western Australia ... ..	225,136	7,759,317	34 9 4	22 17 1
Tasmania... ..	120,252	4,224,662	35 2 7	19 15 11
Northern Territory ... ..	861	41,115	45 15 1	11 4 6
Total ... ..	3,413,280	162,273,233	47 10 10	29 2 9

The amount on deposit in the savings banks in New South Wales was far in excess of the figures in any other State, but the average amount per account was exceeded in Queensland, and the amount per head of population in South Australia and Victoria. In comparison with the figures for the previous year there was an increase of £9,126,000 in the savings bank deposits in Australia, the increase in New South Wales being £4,397,000.

*Deposits in all Banks.*

In June, 1922, the total amount of deposits in the savings and the trading banks in New South Wales was £161,274,611, or £75 0s. 2d. per head of population. A comparative statement of each class of deposits is shown below. The amounts of interest-bearing deposits in the trading banks differ from the figures in preceding tables which include the savings deposits in the Commonwealth Bank in the June quarter of each year.

June.	Deposits bearing Interest.			Deposits not bearing Interest.	All Deposits.	
	Savings Banks.	Trading Banks.	Total.		Total.	Per head of Population.
	£	£	£	£	£	£ s. d.
1913	29,568,282	30,287,205	59,855,487	26,504,388	86,359,875	47 9 1
1914	33,167,523	31,931,981	65,099,504	29,944,028	95,043,532	50 14 3
1915	35,562,649	33,148,700	68,711,349	33,186,317	101,897,666	53 17 8
1916	37,363,272	33,884,082	71,247,354	43,610,878	114,858,232	60 13 10
1917	40,836,747	33,915,476	74,752,223	46,599,978	121,352,201	63 13 10
1918	43,039,012	36,126,228	79,165,240	46,125,775	125,291,015	64 9 10
1919	47,070,342	43,510,166	90,580,508	45,215,578	135,796,086	87 19 7
1920	49,933,535	45,198,528	95,132,063	52,878,126	148,010,189	71 10 9
1921	57,394,441	48,322,625	105,717,066	53,044,965	158,762,031	75 9 4
1922	61,791,273	47,206,660	108,997,933	52,276,678	161,274,611	75 0 2

The total amount of deposits increased by 87 per cent. between 1913 and 1922, and the amount per head by 58 per cent. The most rapid growth occurred in the savings bank deposits, namely, 109 per cent.; the deposits at call in the trading banks were higher by 97 per cent., and the interest-bearing deposits in the trading banks by 56 per cent.

## INCORPORATED COMPANIES.

The legislation relating to incorporated companies in New South Wales is contained principally in the Companies Act, 1899, the amending Acts of 1900, 1906, and 1907, the Companies (Death Duties) Act, 1901, and the Companies (Registration of Securities) Act, 1918. These enactments follow the general provisions of Imperial Acts relating to companies, with deviations embodying the results of local experience.

The formation of a company, association, or partnership of more than ten persons in a banking business, or of twenty in any other business trading for profit, is prohibited, unless it is registered under the Companies Act, or incorporated under some other enactment, by royal charter, or by letters patent, or as a no-liability company.

The liability of members of a company may be limited by shares or by guarantee, or it may be unlimited. Under certain conditions associations formed for the purpose of promoting commerce, art, science, religion, charity, or other useful object, may be registered with limited liability. Special provision is made to regulate the formation of no-liability mining companies and the liability of members for calls and for contributions to meet debts and liabilities in the event of winding-up ceases upon registration, shares upon which calls are unpaid being forfeited.

An important amendment of the company law was made in 1918, when the Companies (Registration of Securities) Act was passed to provide for the registration of debentures issued by companies.

Particulars relating to the registration of new companies and of increases of capital are shown below, the figures for the quinquennial periods representing the annual average :—

Period.	Limited Companies (average per annum).				No-Liability Mining Companies (average per annum).			
	New Companies.		Increases of Capital.		New Companies.		Increases of Capital.	
	No.	Nominal Capital.	No.	Nominal Amount.	No.	Nominal Capital.	No.	Nominal Amount.
		£		£		£		£
1901-05 ...	113	3,104,766	13	483,990	25	301,766	5	24,175
1905-10 ...	231	5,184,658	23	1,010,710	45	430,112	7	29,634
1911-15 ...	383	10,263,455	58	3,468,139	20	308,017	3	31,395
1916 ...	156	4,187,075	19	757,500	7	125,000	...	...
1917 ...	159	5,918,267	19	494,500	8	77,500	2	15,000
1918 ...	221	6,428,907	60	1,950,190	15	238,500	2	20,000
1919 ...	267	9,137,360	78	3,071,100	12	118,255	2	4,000
1920 ...	801	61,654,857	291	11,848,073	26	862,100	1	18,000
1921 ..	462	20,255,150	93	5,454,507	10	234,625	6	50,950

Between 1901 and 1915 there was a steady increase in the promotion of limited companies, principally joint-stock companies, and a large amount of capital was invested in the expansion of existing enterprises, especially in the years immediately preceding the outbreak of the war. In 1915 and 1916 there was a noticeable slackening, and the Federal Government passed regulations under the War Precautions Act to prohibit the issue or subscription of fresh capital unless under permit, the object being to encourage the flow of capital into loans for war purposes. After 1917 the number of registrations began to rise again, as industrial and commercial enterprises prospered in consequence of war expenditure. In 1920 there was a remarkable outburst of company promotion, and the registrations of limited companies rose from 267 to 801, and the nominal capital from £9,137,360 to £61,654,857. The figures are inflated by reason of the reconstruction of many companies to meet altered conditions of industry and rises in prices and wages, but the Registrar-General has estimated that 648 entirely new companies were registered during the year with a nominal capital of £38,700,000, as compared with an annual average of 383 registrations, including reconstructions during the quinquennium 1911-15, the nominal capital being £10,263,000.

Foreign companies, *i.e.*, those formed or incorporated in any place outside New South Wales, are required to be registered before commencing to carry on business in the State. During the period 1911 to 1919 the number of such registrations was, on an average, about 52 per annum; in 1920 there were 100 registrations, and 72 were effected during 1921, which was the first year in which the nominal capital was recorded, the aggregate amount being £31,121,396.

#### CO-OPERATIVE TRADING SOCIETIES.

Co-operative trading and investment societies are registered under the Building and Co-operative Societies Act, 1901; liability is limited, and a member may not hold an interest exceeding £200 in any society, though a limit is not placed on the amount of interest which a society may hold in any other registered co-operative society. In view of the extent of industrial organisation in the State it is remarkable that co-operation, which in other countries is supported largely by industrial workers, has not made greater progress in New South Wales. In 1922 there were only seventy-nine societies, with an aggregate membership of 49,670.

The majority of the societies are consumers' distributive societies organised on the Rochdale plan of "dividend upon purchase," conducting retail stores, and they buy their supplies through the agency of a wholesale society with which they are affiliated. The societies have met with success in the Newcastle and other mining districts, and in the parts of the metropolitan area where large numbers of industrial workers reside. Co-operative effort for production is a prominent feature of the dairying industry, most of the butter factories being organised on a co-operative basis, but societies of this class are registered usually under the Companies Act, and are outside the scope of the Building and Co-operative Societies Act; in fact, registration under the latter enactment ceases when a society is constituted as a company under the Companies Act.

The transactions of co-operative societies during the last five years are given in the following table:—

Particulars.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
Number of Societies ... ..	44	44	50	62	79
Number of Members ... ..	40,791	43,239	43,381	48,313	49,670
Liabilities—	£	£	£	£	£
Share Capital ... ..	310,776	348,341	349,309	429,230	519,436
Reserves and Net Profits ..	171,542	194,914	223,160	262,831	253,709
Other Liabilities ... ..	166,256	184,100	216,014	262,258	299,271
Total Liabilities ... ..	£ 648,574	727,355	788,483	954,319	1,072,416
Assets—					
Freehold, Plant, etc. ... ..	202,880	211,342	219,439	258,301	314,480
Stock ... ..	313,826	352,327	377,946	450,817	471,824
Other Assets ... ..	131,868	163,686	191,098	245,201	286,112
Total Assets ... ..	£ 648,574	727,355	788,483	954,319	1,072,416
Expenditure—					
Purchases ... ..	1,509,237	1,774,730	2,015,519	2,697,926	2,969,522
Expenses, Interest, etc. ...	268,671	293,426	326,512	413,866	500,924
Total Expenditure ... ..	1,777,908	2,068,156	2,342,031	3,111,792	3,470,446
Income—					
Sales, &c. ... ..	1,888,925	2,193,036	2,478,801	3,256,981	3,679,507
Discounts, &c. ... ..	24,751	22,652	23,339	34,211	40,995
Total income ... ..	1,913,676	2,215,688	2,502,140	3,291,192	3,720,502

The number of co-operative societies on the register, which had remained fairly constant for over ten years, began to increase in 1919, when people were seeking means to combat a rapid advance in prices. The registrations include some societies which lapsed after making preliminary arrangements, and did not actually engage in business, but evidence of a marked growth in regard to co-operation may be gained from the records of the financial transactions, the amount of sales having increased by £1,200,000, or by 48 per cent. in the last two years.

In 1921-22 the expenses, including interest and depreciation, amounted to £500,924, or 13·6 per cent. on the amount of sales, and the result of the year's trade was a net profit of £248,527, which is equal to a rate of 6·7 per cent. on the sales; a sum of £19,901 was paid as interest on shares, and £248,527 as dividends on purchases.

#### BENEFIT BUILDING AND INVESTMENT SOCIETIES.

Under the existing law any number of persons may form a benefit building and investment society to enable members to erect or purchase dwellings, etc.,



by loans secured to the society by mortgage until the amount of the shares has been fully paid. These institutions are registered as permanent building societies or as terminating building societies, with limited membership, on the Starr-Bowkett principle of appropriation by ballot.

The aggregate liabilities and assets of permanent building societies for the last five years are shown in the following statement :—

Particulars.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
Number of Societies ...	8	8	8	8	8
Liabilities—	£	£	£	£	£
Deposits... ..	485,139	485,910	485,764	496,298	506,603
Share Capital ...	291,375	293,012	298,920	327,322	338,644
Reserves... ..	143,125	138,102	142,705	158,879	171,100
Other Liabilities ...	43,791	53,117	57,435	48,939	52,116
Balance of Profit ...	31,557	52,826	63,171	67,666	65,882
Total ... ..	994,987	1,022,967	1,047,995	1,099,104	1,134,345
Assets—					
Advances ... ..	733,582	774,077	839,465	885,102	931,593
Other Assets ... ..	261,405	248,890	208,530	214,002	202,752
Total ... ..	994,987	1,022,967	1,047,995	1,099,104	1,134,345

There are only eight permanent building societies and the number has remained constant throughout the period under review though the volume of business has expanded. The income during the year 1921-22 amounted to £98,577, of which the largest item was interest, £95,628, and the expenditure, which amounted to £91,547, included £67,715, paid as interest on shares and deposits and as dividends, and £4,138 to reserves.

Particulars relating to Starr-Bowkett Building Societies for the same years are shown below.

Particulars.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
Number of Societies ...	106	114	119	133	140
Liabilities—	£	£	£	£	£
Members' Subscriptions	1,221,961	1,333,832	1,443,803	1,562,735	1,689,360
Other Liabilities ...	42,127	38,828	53,438	66,974	79,306
Balance of Profit ...	130,624	146,410	164,956	183,950	203,628
Total ... ..	1,394,712	1,519,070	1,662,197	1,813,659	1,972,294
Assets—					
Advances ... ..	1,290,341	1,401,392	1,521,008	1,656,706	1,800,483
Other Assets ... ..	104,371	117,678	141,189	156,953	171,811
Total ... ..	1,394,712	1,519,070	1,662,197	1,813,659	1,972,294

The subscriptions received from shareholders in 1921-22 amounted to £291,480, and the withdrawals to £81,732; the advances on mortgage amounted to £484,212, and repayments to £274,872, and the sum due on account of advances at the end of the year was £1,800,483. The average amount advanced is usually £260, and apparently about 1,870 members obtained advances during the year.

## FRIENDLY SOCIETIES.

The affairs of the friendly societies in New South Wales are conducted in accordance with the Friendly Societies Act of 1912 and its amendments. The societies are compelled to register, and are required to furnish periodical returns, giving details relating to membership, sickness, mortality, benefits, and finances. In this chapter finances only are discussed, and the figures in the following tables relate to the societies which provide benefits such as medical attendance, sick pay, and funeral donations, and are exclusive of the particulars of miscellaneous societies registered under the Friendly Societies Act, such as dispensaries, medical institutes, and accident societies. Other matters relating to friendly societies are discussed in a later chapter of this Year Book.

Early legislation did not make adequate provision for maintaining the solvency of the friendly societies, but in 1899 an Act was passed to bring their affairs under State supervision and to make provision for the actuarial certification of tables of contributions, for quinquennial valuations, the investigation of accounts, and other measures for safeguarding the funds. The Act and its amendments were consolidated in 1912. Amending Acts passed in 1913, 1916, and 1920, render less rigid a clause which requires the moneys received or paid on account of a particular benefit to be kept in a separate account and to be used only for the specific purpose. Where the sickness and funeral funds of a society are administered by one central body for the whole society they may be treated now as one fund, and on valuation being made the Registrar may authorise surplus moneys belonging to a fund to be used in any manner for the purposes of any other fund.

*Actuarial Valuations.*

In the quinquennial valuations of friendly societies, with the exception of the first, the experience of the societies in New South Wales during the nine years 1900-08 has been used as a basis. In the first valuation, as at 31st December, 1904, the monetary tables were based on the experience of the Manchester Unity Independent Order of Oddfellows of England, for the period 1866-1870, with 3 per cent. interest, except in the case of one society in which 4 per cent. interest was adopted. The valuation embraced eighteen affiliated societies, and thirteen single societies; 96,422 members were valued for sickness benefits, and 97,511 for funeral benefits, with 51,155 subsidiary funeral benefits. The results showed a net deficiency equal to 1s. 4d. per £1, only eight affiliated and three single societies being in a solvent condition.

After the valuation, measures were adopted to improve the financial position of the societies, with the result that the second valuation, as at December, 1909, disclosed a surplus equal to 4d. per £ of liabilities. The valuation was made on a  $3\frac{1}{2}$  per cent. rate, the number of societies being eighteen affiliated and twenty-five single; sickness and funeral benefits were valued for 116,186 members, funeral benefits only for 5,258, and sickness benefits only for 13,109 members; in addition there were subsidiary risks on account of 54,391 persons, including members, their wives and children.

In the third valuation, as at 31st December, 1914, the risks valued for sickness and funeral benefits numbered 150,714, and there were 22,582 for sickness only, 8,055 for funeral only, and 67,635 for subsidiary risks. The assets disclosed by the valuation were equal to £1 0s. 7d. for every £1 of liabilities. During the five years which elapsed between the third and fourth valuations the effects of the war and of an epidemic of influenza caused a heavy drain on the funds of the societies, nevertheless the results showed an improvement in their financial condition in 1919 as compared with 1914. The total number of risks valued in 1919 was 259,155, viz., for sickness and

funeral, 147,892; funeral only, 12,360; sickness only, 20,520; and subsidiary benefits to widows, children, etc., 78,383. The rate of interest assumed in respect of the funds of each society was determined on its experience during the quinquennium, being 4 per cent. in the case of eleven societies, and  $3\frac{1}{2}$  per cent. in the other societies. Particulars relating to the benefits provided by the societies, the contributions payable, and the assistance afforded by the State since the passing of the Subventions to Friendly Societies Act, 1908, in respect of the cost of benefits for aged members, are shown elsewhere in this volume. The following summary shows the results of all the societies combined, as at each of the four valuations:—

Year.	Liabilities.	Assets.			Surplus.	Assets per £ of Liabilities.
	Value of Benefits.	Accumulated Funds.	Value of Future Contributions.	Total.		
	£	£	£	£	£	s. d.
1904	3,981,252	809,133	2,900,499	3,709,632	(-) 271,620	18 8
1909	4,219,767	1,214,889	3,071,269	4,286,158	66,391	20 4
1914	5,411,716	1,658,066	3,905,894	5,563,960	152,244	20 7
1919	5,524,765	1,973,642	3,786,983	5,760,625	235,860	20 10

In 1919 the liabilities of the affiliated societies amounted to £5,439,641, and the assets to £5,663,084, showing a surplus of £223,443, or 10d. in the £, but three of the societies showed deficiencies amounting in the aggregate to £67,810. The assets of the single societies amounted to £97,541, or £12,417 more than the liabilities, the surplus being 2s. 11d. per £, though four single societies showed deficiencies amounting to £2,019.

The funds for valuation purposes increased by over £315,000 during the quinquennium 1914-1919, and the average interest earnings rose from 4·7 per cent. to 5·4 per cent. as a result of the high interest rates prevailing, and the policy of centralising the control of the funds had facilitated more profitable investment. The bulk of the funds, about 72 per cent., was invested in mortgages; on account of investments in war and peace loans, the proportion of the funds in Government securities rose from 4 per cent. in 1914 to 10·8 per cent. in 1919. Interest bearing bank deposits declined proportionately from 11 per cent. to 7 per cent. during the quinquennium, and there was a decrease in the amount in buildings and freehold properties, which do not generally give a satisfactory return.

#### *Accumulated Funds.*

The following statement illustrates the growth of the funds of the Friendly Societies since 1912:—

At 31st December.	Sickness and Funeral Funds.	Medical and Management Fund.	Other Funds.	All Funds.	
				Total.	Per Member.
	£	£	£	£	£
1912	1,463,502	82,538	51,715	1,597,755	8·88
1913	1,559,102	87,446	52,171	1,698,719	9·01
1914	1,641,704	88,256	54,971	1,784,931	9·79
1915	1,734,858	89,421	52,548	1,876,827	10·50
1916	1,820,708	101,092	48,471	1,970,271	11·02
1917	1,916,846	122,759	55,067	2,094,672	11·79
1918	1,954,085	190,995	63,102	2,208,182	12·21
1919	1,953,336	199,115	65,345	2,217,796	12·04
1921*	2,134,339	194,358	83,065	2,411,762	12·08
1922*	2,268,655	204,304	105,978	2,578,937	12·61

\*At 30th June.

During the twelve months ended 30th June, 1922, the total funds of the societies increased by £167,175, the increase being fairly general in all the societies. The amount of the sickness and funeral funds, as stated in the table for the years 1914 and 1919, does not agree with the figures shown in the previous table, the difference being caused by allowances made in the valuations for State subvention due, but not received by the societies at the date of valuation.

### *Receipts and Expenditure.*

The receipts and expenditure of the friendly societies since 1912 are shown in the following statement. The figures quoted for 1920-21 relate to the period of eighteen months ended 30th June, 1921, as a recent amendment of the Friendly Societies Act prescribes that the returns must be furnished in each year for the period ended 30th June and not for the calendar year as formerly :—

Year.	Receipts.				Expenditure.					
	Contributions.	Interest.	Other.	Total.	Sick Pay.	Funeral Donations.	Medical Attendance and Medicine.	Expenses of Management.	Other.	Total.
	£	£	£	£	£	£	£	£	£	£
1912	456,097	69,599	32,493	558,189	166,270	40,828	157,821	66,485	42,654	474,058
1913	489,698	75,038	37,365	602,101	173,451	45,952	170,694	69,226	41,914	501,137
1914	496,961	80,707	34,915	612,583	172,796	44,446	182,308	87,358	39,463	526,371
1915	491,928	87,591	34,597	614,116	177,198	50,131	182,705	88,419	23,767	522,220
1916	508,033	95,193	28,645	631,781	172,497	61,566	178,926	89,630	35,718	538,357
1917	524,341	100,947	53,433	678,726	168,986	69,371	178,789	96,830	40,349	554,325
1918	543,269	117,941	114,895	776,105	183,735	84,663	180,370	96,939	116,388	662,595
1919	551,278	117,524	40,740	709,542	274,929	89,265	186,801	106,115	42,818	699,928
1920-21*	887,279	191,613	76,985	1,155,877	297,051	80,201	317,221	199,399	68,039	961,911
1921-22	661,620	142,205	94,556	898,381	222,586	58,353	262,269	137,994	53,936	733,188

\* Eighteen months ended June, 1921.

The figures afford convincing evidence of the steadily increasing importance of the friendly societies. The total amount disbursed in benefits in the year ended June, 1922, was £541,208, as compared with £330,000 in 1911 and £551,000 in 1919. The cost of sick pay and funeral donations during 1921-22 was comparatively much lower than in 1919, when an epidemic of influenza caused a greater financial loss to the societies than the war. The cost of medical attendance and medicine was higher as additional charges were made by medical practitioners and pharmacists, and the average cost per adult member rose from 20s. 5d. in 1914 to 21s. 10d. in 1919, and to 27s. 10d. in 1921-22.

The large amounts grouped under the headings of "other receipts" and "other expenditure" in 1918 were due to transfers from the surplus sick and funeral funds of one society to the management fund. Absolutely and relatively, there has been a marked increase in the cost of management; in 1921-22 the total expenses, £137,994, were equal to 13s. 6d. per annum per head of mean membership as compared with 9s. 5d. per head in 1914, and 11s. 7d. in 1919; and in proportion to contributions and to total income, expenses in 1921-22 represented 20·9 per cent. and 15·4 per cent. respectively, as compared with 17·6 per cent. and 14·3 per cent. in 1914.

### INSURANCE.

In New South Wales there is no legislation dealing specifically with the conduct of insurance business, the insurance companies being subject to the Companies Acts. The Life, Fire and Marine Insurance Acts of 1902 and 1917 were enacted in the State Parliament to provide for the protection of

life insurance policies and annuities against creditors, and for the issue of special policies in substitution for those lost or destroyed. The section of the 1902 Act relating to marine insurance was superseded by the Commonwealth Marine Insurance Act of 1909, which defines the limit of marine insurance and regulates the terms of the contracts, the liability of the insurers, etc. A Commonwealth Act passed in 1905 limits the amount of assurance payable on the death of children; the maximum amount ranges from £5 in respect of children under 1 year to £45 in the case of children between the ages of 9 and 10 years, the sums being payable only to parents or their personal representatives. The provisions of the Act do not apply, however, to any insurance effected by persons having an insurable interest in the lives insured or to insurances, *e.g.*, industrial assurances, effected by parents, in which the amount payable on the death of a child does not exceed the total amount of premiums actually paid, plus interest up to 4 per cent. per annum.

#### LIFE ASSURANCE.

There were twenty-six institutions transacting life assurance business in the State during 1921; sixteen were local, five had their head offices in Victoria, one in New Zealand, one in the United Kingdom, and three in the United States of America. Eight institutions are mutual, and eighteen are partly proprietary companies, whose policy holders, however, participate to some extent in the profits. Several companies, with head offices outside the Commonwealth, unite life and other classes of insurance, and have local branches or agencies, but their transactions in life risks in this State are unimportant.

Particulars relating to life assurance are obtained from the reports published by the companies, and from official returns collected under the Census Act of 1901.

Life assurance business in New South Wales is conducted generally on the principle of premiums which remain constant throughout the term for which they are payable. The rates quoted by the companies transacting new business in the State vary considerably, being affected by the conditions relating to bonuses and the age of the institutions.

When the age at entry is 25, the annual premium for a whole-life assurance of £100 varies from £1 17s. 7d. to £2 4s. 2d.; age 35, from £2 8s. 10d. to £2 17s. 6d.; and age 45, from £3 7s. 3d. to £3 19s. 1d. For endowment assurance payable at age 60 or previous death, when the age at entry is 20 years, the rates are £2 2s. 8d. to £2 11s. 2d.; age 30, £2 19s. 4d. to £3 9s. 2d.; and age 40, £4 14s. 5d. to £5 8s. 1d.

All societies transacting business in New South Wales allow policy-holders a consideration on surrendering unmatured policies, provided a certain time has elapsed since issue, or a certain number of premiums has been paid. Three companies allow surrender values after the policy has been in force for a period of two years, but with other companies the period must be longer. For a whole-life assurance of £100, excluding bonus additions, the refund allowed after two annual premiums have been paid ranges from 12s. 1d. to £1 8s., when the age at entry is 25; 17s. 1d. to £1 18s. 10d. when the age at entry is 35; and £1 5s. 8d. to £2 17s. 1d. when the age at entry is 45. After five annual payments the surrender values for similar ages of entry are respectively £1 17s. 1d. to £5 4s. 4d.; £2 11s. 1d. to £6 11s. 5d.; and £3 13s. 1d. to £9 4s. 5d. For endowment assurance payable at age 60 or previous death, after two annual premiums have been paid, the surrender values range from £1 9s. 8d. to £1 15s. 2d. when the age of entry is 20, and after five annual premiums have been paid £2 6s. 9d. to £5 11s. 2d. When the age of entry is 30, the values range from £1 9s. to £2 17s. after two years' duration, and £3 16s. 5d. to £9 6s. 7d. after five years.

*New South Wales Business—Ordinary branch.*

The following tables relate only to assurances effected in New South Wales, and the extent of the business in force in the ordinary branch during the year 1921 is shown below :—

Institutions with Head Office in—	Policies in Force, exclusive of Annuities.	Amount Assured exclusive of Bonuses and Re-assurances.	Bonus Additions.	Total.	Annual Premiums Payable.
	No.	£	£	£	£
New South Wales ...	180,002	49,730,038	7,718,440	57,448,478	1,626,306
Victoria ...	51,936	12,057,255	249,636	12,306,891	458,782
New Zealand ...	737	78,500	...	78,500	3,273
United Kingdom ...	113	35,161	*	35,161	1,086
United States ...	4,185	2,116,708	79,887	2,196,595	65,335
Total ...	236,973	64,017,662	8,047,963	72,065,625	2,154,782

\* Not available.

Of the amount assured 97 per cent. is with Australasian societies, nearly 78 per cent. being with institutions with head offices in New South Wales, and 19 per cent. with Victorian institutions; 3 per cent. is with American companies. The amount held by the British society is comparatively small as it does not now accept life business in New South Wales. The average amount of assurance, exclusive of bonuses and re-assurances, per policy held in Australasian societies is £266, in the British £311, and in the American £506.

The business (exclusive of annuities) may be classified broadly in three categories,—(1), whole-life assurance payable at death only; (2), endowment assurance payable at the end of a specified period or at death prior to the expiration of the period; (3), pure endowment payable only in case of survival for a specified period.

Particulars regarding each class of assurance in the ordinary branch in force in 1920 and 1921 are shown below :—

Classification.	1920.				1921.			
	Policies in Force.	Amount Assured exclusive of Bonuses and Re-assurances.	Bonus Additions.	Annual Premiums Payable.	Policies in Force.	Amount Assured exclusive of Bonuses and Re-assurances.	Bonus Additions.	Annual Premiums Payable.
	No.	£	£	£	No.	£	£	£
Assurance...	91,780	36,002,932	5,437,652	1,111,078	98,728	40,047,713	5,780,065	1,231,991
Endowment Assurance	115,488	20,643,033	2,068,915	786,062	121,255	21,857,283	2,230,713	836,783
Pure Endowment	14,898	1,864,200	39,027	76,707	16,990	2,112,666	37,185	86,008
Total...	222,166	58,510,165	7,545,594	1,973,847	236,973	64,017,662	8,047,963	2,154,782

The majority of the policies, viz., 51 per cent., represents endowment assurances, whole-life policies were 42 per cent. and endowments 7 per cent. of the total number. The amount assured under the whole-life policies represents 63 per cent. of the total (exclusive of bonus additions), the average per policy being £407; endowment assurance policies, with an average of £180 per policy, cover 34 per cent. of the total amount assured; and endowment policies, with an average of £124 per policy, 3 per cent.

*Industrial Assurance.*

A large business in industrial assurance has developed in New South Wales during recent years. The policies in this class are for small amounts and the premiums in most cases are payable weekly or monthly. Industrial business in the State is transacted by the Australasian companies only.

The following table shows the industrial business in force in New South Wales at the close of 1921 :—

Institutions with Head Office in—	Policies in Force, exclusive of Annuities.	Amount Assured, inclusive of Bonuses.	Annual Premiums Payable.
	No.	£	£
New South Wales ...	240,526	8,194,172	472,434
Victoria ...	107,402	3,192,018	239,985
New Zealand ...	10,565	325,543	18,142
Total ...	358,493	11,711,733	730,561

In the industrial branch 74 per cent. of the number of policies and 79 per cent. of the amount were held in the form of endowment assurance; and whole-life policies represented 21 per cent. of the number and 16 per cent. of the amount assured. The average amount per policy was £33, viz., assurance £25, endowment assurance £35, and endowment £32.

A classification of the industrial business in force in New South Wales is shown below :—

Classification.	1920.			1921.		
	Policies in Force.	Amount Assured inclusive of Bonus Additions.	Annual Premiums Payable.	Policies in Force.	Amount Assured inclusive of Bonus Additions.	Annual Premiums Payable.
	No.	£	£	No.	£	£
Assurance ...	76,405	1,846,946	100,274	75,919	1,882,420	101,943
Endowment Assurance ...	234,704	7,550,226	497,003	265,580	9,285,116	594,495
Pure Endowment...	12,277	346,611	24,631	16,994	544,197	34,123
Total ...	323,386	9,743,783	621,908	358,493	11,711,733	730,561

Transactions in annuities are not numerous, the business in force in New South Wales in 1921 being 586 policies for an aggregate amount of £40,721 per annum in the ordinary branch, and six policies representing £376 per annum in the industrial department.

#### *New Business.*

The new life assurance business, ordinary and industrial, effected in New South Wales during the last ten years is compared in the following table :—

Year.	Ordinary Branch.			Industrial Branch.		
	Number of Policies.	Amount Assured.	Annual Premiums Payable.	Number of Policies.	Amount Assured.	Annual Premiums Payable.
		£	£		£	£
1912	19,500	4,300,576	148,908	53,820	1,476,965	96,693
1913	19,847	4,414,664	156,078	55,384	1,506,470	102,016
1914	17,217	3,914,935	142,792	48,267	1,332,966	91,427
1915	15,976	3,784,103	147,554	45,188	1,258,683	86,959
1916	16,372	4,100,923	166,301	50,649	1,516,518	102,668
1917	18,010	4,914,896	192,308	53,491	1,720,790	115,738
1918	21,643	5,972,028	252,052	62,279	2,138,259	145,630
1919	21,543	6,483,990	236,541	64,199	2,437,850	160,699
1920	28,837	7,973,324	281,379	70,305	2,986,482	187,560
1921	27,706	8,693,745	306,867	79,318	3,819,905	225,134

At the beginning of the period under review the volume of new business was increasing slowly, but the incidence of the war caused a decrease during 1914 and 1915. Then business began to improve, and the amount assured under new policies in the ordinary branch has risen since in each year by nearly 10 per cent., except in 1918 and in 1920, when there was a much more rapid growth, and the amount of new assurances rose by over 22 per cent. The abnormal increase in 1918 was due in a large measure to arrangements made by some of the societies for combining life assurance with war loan subscriptions; in 1920 it was attributable to general expansion in business activities. In the industrial branch the movement in regard to new business was somewhat similar until 1916, then business began to expand at a remarkable rate, the amount of new assurances rising by over 20 per cent. in each year except in 1917 and 1919 when it increased by over 13 per cent. In 1921 the amount of new assurances in the ordinary branch was higher by £720,421, or 9 per cent., than in the previous year, and the new industrial assurances were greater by £833,423, or 28 per cent. The average amount per new policy in the ordinary branch increased from £220 in 1912 to £314 in 1921, the increase being fairly steady until 1918, after which it increased from £276 to £301 in 1919, then dropped in the following year to £276.

A comparative statement of the amount of ordinary and industrial business, excluding bonuses and annuities, in force during each of the last ten years is shown below :—

Year.	Ordinary Branch.			Industrial Branch.		
	Policies.	Amount Assured.	Annual Premiums Payable.	Policies.	Amount Assured.	Annual Premiums Payable.
	No.	£	£	No.	£	£
1912	167,399	39,652,665	1,274,797	173,941	3,918,060	238,800
1913	173,834	41,432,591	1,382,162	191,333	4,413,289	273,997
1914	178,483	42,692,910	1,432,261	202,439	4,712,117	296,597
1915	181,671	43,520,335	1,465,347	211,881	5,000,621	318,306
1916	187,514	45,460,333	1,550,311	223,723	5,599,819	358,126
1917	192,962	47,636,307	1,644,692	248,037	6,298,106	404,836
1918	201,559	50,812,701	1,741,249	273,716	7,301,713	472,448
1919	207,906	53,953,151	1,828,780	294,573	8,275,956	535,666
1920	222,166	58,510,165	1,973,347	323,386	9,742,791	621,908
1921	236,973	64,017,662	2,154,782	358,493	11,711,733	730,561

The amount assured in the ordinary branch has increased by nearly 24½ millions, or by 61 per cent., since 1912, and in the industrial branch by 7¾ millions, or by 199 per cent. The development of life assurance in



relation to the population is shown in the following statement, which illustrates also the increase in the average amount per policy and in the premium payable.

Year.	Policies per 1,000 of Population.		Amount Assured per Head of Population.		Average Amount Assured Per Policy.		Average Annual Premium payable per Policy.	
	Ordinary.	Industrial.	Ordinary.	Industrial.	Ordinary.	Industrial.	Ordinary.	Industrial.
	No.	No.	£ s. d.	£ s. d.	£	£	£ s. d.	£ s. d.
1912	94	97	22 3 10	2 3 10	237	23	7 12 4	1 7 6
1913	94	104	22 8 10	2 7 10	238	23	7 19 0	1 8 8
1914	95	103	22 12 8	2 10 1	239	23	8 0 6	1 9 4
1915	96	112	22 19 2	2 12 9	240	24	8 1 4	1 10 1
1916	99	122	24 1 10	2 19 4	242	24	8 5 4	1 11 2
1917	100	129	24 15 10	3 5 7	247	25	8 10 6	1 12 8
1918	103	139	25 17 7	3 14 5	252	27	8 12 9	1 14 6
1919	102	144	26 9 2	4 1 2	260	28	8 15 11	1 16 4
1920	106	154	27 19 1	4 13 1	260	30	8 17 8	1 18 6
1921	111	168	30 1 3	5 10 0	270	33	9 1 10	2 0 9

In 1921 one in every ninety persons in the State held a policy in the ordinary branch and one in every fifty-nine an industrial policy, the amounts assured per head of population being £30 1s. 3d. in the ordinary branch and £5 10s. in the industrial. The year 1912 was the first in which the industrial policies were more numerous than the ordinary insurances, and in that year the ordinary policy-holders represented, on an average, one for every 102 persons and the industrial policy holders one for 98.

*Australasian Assurance Societies—Total Business.*

The life assurances undertaken in New South Wales by foreign companies represent only a small proportion of their total business, and particulars relating to their transactions have been omitted from the following statements, which relate mainly to the finances of the institutions.

A summary of the total business—ordinary and industrial—of the Australasian societies, and of the amount of receipts, expenditure, and accumulated funds, at intervals since 1895, is shown below :—

Year.	Societies.	Policies in Force.	Receipts.	Expenditure.	Accumulated Funds, including Paid-up Capital.		Interest.	
					Additions during the Year.	Total Amount at end of Year.	Amount Received.	Average Rate Realised on Mean Funds.
	No.	No.	£ 000	£ 000	£ 000	£ 000	£ 000	per cent.
1895	10	268,242	3,392	2,334	1,058	20,438	1,037	5·21
1900	11	331,868	4,093	2,648	1,445	26,491	1,162	4·51
1905	14	756,585	5,437	3,834	1,603	34,916	1,528	4·48
1910	11	1,056,173	7,131	4,619	2,512	46,196	1,963	4·46
1915	14	1,424,196	9,474	6,084	3,390	62,958	2,763	4·51
1920	14	1,944,845	14,080	7,944	6,136	83,760	4,116	4·83
1921	22	2,085,728	12,734	7,528	6,448	90,208	4,571	5·26

The annual additions to the funds have shown a considerable increase since 1910, and there has been a gradual increase in earning power since that year, when 4·46 per cent. was realised, and the most recent rate, 5·26 per cent., is slightly higher than that of 1895, being the highest return during the period under review. A comparison with the bank rate of interest on fixed deposits, given on page 191, shows that diminished rates were general until a slight increase took place between the years 1910 and 1915, and continued during following years, and the interest earned by the insurance companies has held a correlation to the general tendency.

The following table shows details of the receipts and disbursements of the Australasian institutions during 1921 for both classes of business:—

Particulars.	Ordinary Branch.	Industrial Branch.	Total.
Receipts—			
Premiums—	£	£	£
New ... ..	1,193,793	18,959	1,212,752
Renewal ... ..	7,166,262	2,214,391	9,380,653
Consideration for Annuities... ..	56,340	...	56,340
Interest ... ..	4,091,930	379,420	4,471,350
Rents and other Receipts ... ..	225,272	41,581	266,853
Total Receipts ... ..	12,733,597	2,654,351	15,387,948
Expenditure—			
Claims ... ..	4,242,493	408,732	4,651,225
Surrenders ... ..	789,149	32,328	821,477
Annuities ... ..	116,285	295	116,580
Cash Bonuses and Dividends ... ..	301,729	67,287	369,016
Expenses ... ..	1,756,737	886,666	2,643,403
Amount written off to Depreciation, Reserves, Transfers, etc. ... ..	322,005	26,199	348,204
Total Expenditure ... ..	7,528,398	1,421,507	8,949,905

The receipts of the societies consist mainly of premiums on policies and of interest arising from investments; the former represented 69 per cent. of the receipts in 1921 and the latter 29 per cent. Payments on account of death claims, policies matured and surrendered, and cash bonuses, amounted in 1921 to £5,449,656, or 73 per cent. of the total receipts in the ordinary branch, and £508,642, or 36 per cent., in the industrial branch. Expenses of management constituted 23 per cent. of the expenditure in the ordinary branch, and 62 per cent. in the industrial.

#### *Expenses of Management.*

The ratio between management expenses and premium income must necessarily vary with the volume of new business transacted, and with the age of the society, quite apart from the competition for new business. The following

figures show in respect of the ordinary and industrial departments of the Australasian societies, the cost of management, including commission and taxes, and its proportion to premium income and gross receipts.

Year.	Management Expenses.	Premium Income.	Gross Receipts.	Management Expenses.	
				Per cent. of—	
				Premium Income.	Gross Receipts.
	£	£	£		
1895	438,524	2,380,167	3,392,423	18·42	12·93
1900	565,380	2,799,512	4,093,376	20·19	13·81
1905	858,741	3,500,448	5,437,589	24·53	15·79
1910	1,016,153	5,074,204	7,131,250	20·03	14·25
1915	1,252,438	6,591,572	9,474,126	19·00	13·22
1920	2,222,218	9,870,814	14,079,302	22·51	15·78
1921	2,613,403	10,649,745	15,387,948	24·82	17·18

The expenses of management of the ordinary business in 1921 represented in the aggregate 13·8 per cent. of the total receipts, and 20·9 per cent. of the premium income, and of the industrial branch, 33·4 and 39·7 per cent. respectively.

The expenses of the industrial branch are necessarily very high in proportion to the receipts, on account of the house-to-house method of collection, which is an essential feature of the system.

Particulars regarding the management expenses of the ordinary and industrial branches are stated separately in the following table for each year since 1915.

Year.	Ordinary Branch.		Industrial Branch.	
	Proportion of Management Expenses to—			
	Premium Income.	Total Receipts.	Premium Income.	Total Receipts.
	per cent.	per cent.	per cent.	per cent.
1915	15·39	10·32	38·86	34·12
1916	15·45	10·23	38·82	33·82
1917	16·34	10·86	38·23	33·21
1918	16·65	11·05	38·06	32·80
1919	18·06	11·91	33·33	32·90
1920	18·60	12·48	38·40	32·80
1921	20·88	13·81	39·70	33·40

In the ordinary branch the lowest proportions of management expenses to premium income and to total receipts shown by any company in 1921 were 9·46 per cent. and 15·37 per cent. respectively; in the industrial branch the lowest proportions were 34·6 per cent and 28·2 per cent.

The proportions were highest in the case of companies established recently, whose disbursements exceeded premium income, owing to initial expenses such as the cost of foundation, organisation, brokerage, and other items, which will not be incurred again.

*Liabilities and Assets.*

The following table gives a summary of the liabilities and assets of the Australasian societies in the year 1921 :—

Liabilities.		Assets.	
<b>Assurance Funds—</b>		<b>Loans—</b>	
Participating in Profits ...	£ 84,548,534	On Mortgage ...	20,005,781
Not participating in Profits ...	931,586	„ Municipal and Other	...
Claims Investment Fund ...	49,236	„ Local Rates ...	11,092,990
Other Assurance Funds ...	2,986,462	„ Reversionary, Life, and	...
		„ Other Interests ...	533,871
Total ...	88,515,818	„ Policies ...	9,226,632
		„ Personal Security ...	39,406
		„ Government Securities..	471,424
		„ Other Debentures and	...
		„ Bonds ...	691,665
		„ Miscellaneous Loans ...	12,344
		Total ...	42,073,513
<b>Other Funds—</b>			
Guarantee and Contingency			
Funds ...	39,364		
Investment Fluctuation			
Fund ...	289,452		
Paid-up Capital ...	1,093,213		
Reserve Funds ...	269,786		
Total Funds ...	90,207,633		
<b>Other Liabilities—</b>			
Claims admitted but not		Government Securities ...	46,095,806
paid ...	1,121,159	Real Estate ...	3,589,563
Outstanding Accounts ...	183,115	Other Assets ...	4,981,802
Miscellaneous ...	5,228,777		
Total Liabilities ...	£96,740,684	Total Assets ...	£96,740,684

In some of the States companies are obliged by law to deposit certain sums with the Treasury as a guarantee of good faith, and these amounts are included in their balance-sheets under the head of Government securities or of deposits.

In former years insurance companies sought only such forms of investment as loans on mortgage, municipal securities, policies of members, etc. but recently attention has been given to Government securities and investments in shares, and since 1915 large sums have been subscribed to war loans. Considerable sums are deposited also with banks, or invested in freehold and leasehold property. Investments on personal security are unusual, and are generally combined with life policies, the total amount under this heading in the year 1921 being only £39,406.

The following comparison relating to liabilities and assets illustrates the rapid growth of the funds, etc. of the assurance societies :—

Year.	Societies.	Liabilities.			Assets.		
		Paid-up Capital and Accumulated Funds.	Other Liabilities.	Total.	Loans on Mortgages, Policies, etc.	Securities, Freehold Property, etc.	Total.
	No.	£	£	£	£	£	£
1895	10	21,497,059	...	21,497,059	15,600,229	5,896,839	21,497,059
1900	11	27,471,223	...	27,471,223	19,013,579	8,457,644	27,471,223
1905	11	35,867,362	...	35,867,362	22,072,031	13,795,301	35,867,362
1910	11	45,668,204	775,785	46,443,989	30,623,778	15,818,211	46,443,989
1915	14	62,958,224	233,113	63,191,337	45,535,992	17,655,345	63,191,337
1920	14	83,759,999	6,260,956	90,020,955	40,127,817	49,893,138	90,020,955
1921	22	90,207,633	6,533,051	96,740,684	42,073,513	54,667,171	96,740,684

The aggregate amount of paid-up capital and accumulated funds has almost doubled since 1910. The ratio of loans on mortgages, etc. to total assets, which was between 60 and 70 per cent. up to the year 1915, has been reduced since to 43 per cent., and Government securities, which in 1915 represented only 17 per cent. of the assets, showed a ratio of 48 per cent. in 1921.

## FIRE, MARINE, AND GENERAL INSURANCE.

The companies transacting fire, marine, and general insurance (as distinct from life assurance) business in New South Wales during 1922 numbered ninety-eight, and some of the life companies transacted accident and workmen's compensation insurance. The aggregate liabilities in New South Wales and elsewhere amounted to £316,745,777, of which £34,653,765 represented paid-up capital; £29,253,314 reserve funds; £41,545,508 reserve for unearned premiums; £125,568,322 insurance and other funds; and £85,724,868 outstanding losses and other liabilities. The assets comprised the following items:—Mortgages and other loans, £15,819,219; Government securities and other investments, £211,721,485; land and house property, £21,792,800; cash on deposit, current account, and in hand, £21,541,908; and other assets, £45,870,365.

The nature of the local insurances effected during the year ended 30th June, 1922, is shown in the following table. The particulars relate to New South Wales risks only; that is, to all business written by the companies represented, in their New South Wales books. Premiums exclude re-insurances and returns; and treaty arrangements are not taken into consideration. In the case of losses, amounts recovered from Australasian re-insuring offices are excluded also. Interest receipts cannot be distributed among the various classes of insurance and are included in one item.

Nature of Insurance.	Premiums less Re- insurances and Returns.	Expenditure.						
		Losses, less Re- insurances.	Expenses of Management.		Total.	Proportion of Premium Income.		
			Com- mission and Agents' Charges	Other.		Losses.	Com- mission and Agents' Charges	Other Manage- ment Expen- ses.
	£	£	£	£	£	percent.	percent.	percent.
Fire .. .. .	1,884,509	1,192,376	273,498	517,540	1,983,614	63·28	14·78	27·46
Marine .. .. .	496,462	295,033	41,673	99,968	437,579	59·61	8·39	20·13
Accident .. .. .	121,590	54,876	23,467	27,114	110,457	45·13	23·41	22·30
Employers' Liability and Workmen's Compensation..	545,962	239,494	52,964	109,380	451,838	53·02	9·70	20·03
Public Risk, Third Party ..	28,379	8,913	3,478	6,076	18,467	31·41	12·25	21·41
Plate-glass .. .. .	42,180	10,935	7,304	10,601	37,840	47·26	17·31	25·13
Motor Car and Motor Cycle ..	178,398	112,458	24,591	41,199	178,248	63·03	13·78	23·09
Hailstone .. .. .	70,178	54,729	12,317	15,313	92,359	77·99	17·55	21·82
Boiler Explosion .. .. .	8,134	2,130	638	4,089	6,907	26·19	8·46	50·27
Live Stock .. .. .	23,058	13,713	6,234	7,392	27,329	59·47	27·03	32·06
Burglary .. .. .	33,947	18,363	6,652	7,335	32,400	54·09	19·59	21·75
Guarantee .. .. .	12,976	5,840	2,077	2,683	10,605	45·01	16·01	20·71
Loss of Profits .. .. .	48,040	15,901	5,663	11,303	32,867	33·10	11·79	23·53
Elevator .. .. .	552	..	117	112	220	..	21·20	20·29
Sprinkler .. .. .	1,366	50	166	282	498	3·63	12·15	20·64
Other .. .. .	1,664	646	196	411	1,253	38·82	11·77	24·70
Total Premiums .. .. .	3,497,395	..	..	..	..	..	..	..
Total Interest, etc... ..	148,993	..	..	..	..	..	..	..
Total .. .. .	3,646,388	2,085,597	471,090	860,853	3,417,500	59·63	13·47	24·61

The total premiums amounted to £3,497,395, and the losses to £2,085,557, the latter being 59·6 per cent. of the premiums. The expenses for commission and agents' charges were £471,090, and for general management £860,853, making a total of £1,331,943, or 38·1 per cent. of the premium income and 36·5 of the gross revenue.

The principal classes of insurance, according to the amount of net premiums in 1922, were fire, employers' liability and workmen's compensation, marine, motor vehicles, and accident. The premium receipts in respect of fire insurance increased largely in 1921, as insurers increased the amount of their policies in view of the increases in the value of property, and remained at a high figure during the following year. Insurance relating to the liability of employers has grown rapidly as wages have risen, and legislation in 1920 extended the application of the Workmen's Compensation Act to higher paid employees. The net premium receipts rose from £206,448 in 1918 to £257,989 in 1920, and to £545,962 in 1922; the losses represent somewhat over 50 per cent. and expenses 30 per cent. of the premiums. The insurance of motor cars is another class of business which has developed rapidly with the increased use and higher value of the vehicles. The premiums received for accident insurance in 1922 were more than twice as high as in 1918. Marine insurance business increased steadily from 1918 to 1921; then the premium receipts declined by 21 per cent. as a result of the decreased activity in the shipping trade.

In proportion to premium income the losses and expenses vary greatly in the different classes of insurance; the ratio of losses was highest in 1922 in regard to the following, in the order named—hailstone, fire, motor vehicles, marine, live stock. The commission and agents' charges were highest in proportion to premiums in live stock and accident insurance. The proportion of other management expenses depends to a great extent on the volume of business transacted by the individual companies.

A summary of the revenue and expenditure in respect of general insurance transactions in New South Wales in each of the last five years is shown below :—

Particulars.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
<b>Revenue—</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>
Net Premiums ... ..	2,035,177	2,165,742	2,465,372	3,565,989	3,497,395
Interest, etc. ... ..	65,148	72,590	83,296	108,018	148,993
<b>Total ... ..</b>	<b>2,100,325</b>	<b>2,238,332</b>	<b>2,548,668</b>	<b>3,674,007</b>	<b>3,646,388</b>
<b>Expenditure—</b>					
Losses ... ..	768,815	887,127	1,229,662	1,753,415	2,085,557
<b>Management—</b>					
Commission and Agents' Charges ... ..	247,501	262,247	286,284	471,187	471,090
Other Expenses ... ..	540,442	614,557	685,951	795,370	860,853
<b>Total ... ..</b>	<b>1,556,758</b>	<b>1,763,931</b>	<b>2,201,897</b>	<b>3,019,972</b>	<b>3,417,500</b>
<b>Proportion of Premium In-</b>	<b>per cent.</b>	<b>per cent.</b>	<b>per cent.</b>	<b>per cent.</b>	<b>per cent.</b>
<b>come—</b>					
Losses ... ..	37·77	40·96	49·88	49·17	59·63
<b>Expenses—</b>					
Commission, etc. ... ..	12·16	12·19	11·61	13·21	13·47
Other ... ..	26·55	28·38	27·82	22·30	24·61

Fire business constitutes more than half of the general insurances. In 1918 the net premiums for fire risks were £1,117,849; the expenditure,

including losses £415,707, amounted to £883,998; and there was an apparent surplus of £233,851 as a result of the year's operations. In the next two years the premium income increased steadily, but the expenditure rose more rapidly, and the apparent surplus in 1920 was less than £51,000. In 1921 a large increase brought the premium income to the sum of £1,876,755; the expenditure was £1,721,194, including losses £998,280, leaving a surplus of £155,561. In 1922 the net premiums were slightly higher, but losses showed a marked increase, and there was an apparent deficit of £104,100.

Fire policies are generally for a period of twelve months, and the majority of the insurance companies set aside at the end of each year a reserve for unexpired risks—usually an amount equal to 40 per cent. of the net premium income. By reviewing the figures to take into account a reserve calculated on that basis, it will be found that fire business has steadily become less favourable to the companies in each of the last five years, that is so far as business in New South Wales is concerned. The net underwriting profit declined from £204,159 in 1918 to £107,617 in 1919, and thereafter there was a net loss, viz., £10,074 in 1920, increasing to £43,109 in 1921 and to £107,207 in 1922. The foregoing figures relating to fire business are exclusive of interest earnings.

The total value of the fire risks insured in 1922 was £448,034,000, and an account of the measures taken for the prevention of fire is given in the chapter "Local Government."

#### BANKRUPTCY.

Statistics relating to the sequestration of estates by persons who are unable to pay their debts, afford in a general way an indication of the financial condition of the community. Petitions for sequestration orders may be made to the Supreme Court of New South Wales by the debtor, or by a creditor; the effect of an order is to vest the property of the bankrupt in an official assignee for division amongst the creditors, the bankrupt being required to lodge with the Registrar in Bankruptcy a statement of his affairs. Creditors may accept proposals for a composition in satisfaction of the debts due to them, or for a scheme of arrangement of the bankrupts' affairs, which becomes binding if approved by the Court and by a majority of creditors representing three-fourths of the proved claims.

Particulars of petitions in bankruptcy during each of the years 1912 to 1921 are shown in the following table:—

Year.	Petitions in Bankruptcy.			Petitions With-drawn, Refused, etc.	Sequestrations.			
	Voluntary.	Compulsory.	Total.		Orders Granted.	Liabilities.	Assets.	Ratio of Assets per £ of Liabilities.
						£	£	s. d.
1912	283	112	395	36	359	210,504	153,633	14 7
1913	238	113	351	31	320	208,755	144,038	13 10
1914	282	123	405	30	375	323,111	141,068	8 9
1915	301	147	448	43	405	428,700	166,748	7 10
1916	248	145	393	43	350	383,448	303,893	15 10
1917	178	123	301	34	267	227,063	208,093	18 3
1918	184	113	297	33	264	221,928	115,776	10 5
1919	193	123	316	34	282	323,222	189,920	11 9
1920	210	134	344	55	289	204,594	139,550	13 8
1921	208	186	394	70	324	311,900	166,457	10 8

The combined effects of war and drought caused financial embarrassment in 1914 and 1915, and the number of petitions rose by nearly one-third. A marked improvement commenced in 1916 and continued for three years, then

the numbers began to increase slowly. The average amount of liability in each year is usually less than £1,000 per sequestration, the figure in 1921 being £963; the ratio of assets to liabilities is very variable, but the amounts stated in the table are taken from the bankrupts' schedules and differ widely from the values established after investigation by the Court.

A bankrupt may apply to the Court, three months after the date of sequestration, for a certificate of discharge to release him from his debts; estates may be freed from sequestration also if the creditors accept a composition or a scheme of arrangement, or if they are paid in full or give a legal quittance of the debts due to them. But it is remarkable that a comparatively small proportion of the estates are freed, though the property of an uncertificated bankrupt, even if acquired after sequestration, is liable to seizure on behalf of unsatisfied creditors. The number of sequestrations during the last ten years was 3,235, and only 1,038 estates were freed by certificates of discharge or release.

#### TRANSACTIONS IN REAL ESTATE.

The procedure in regard to land transfers is regulated under the Real Property Act, commonly known as the "Torrens" Act, which was passed in 1862 and, with its amendments, consolidated in 1900. Its main features are the transfer of real property by registration of title instead of by deeds, the absolute indefeasibility of the title when registered, and the protection afforded to owners against possessory claims—as the title issued under the Act stands good, notwithstanding any length of adverse possession. All lands sold by the Crown since the passing of the Act have been conveyed to purchasers under the provisions of the Real Property Act, but transactions in respect of earlier grants are governed by the Registration of Deeds Act unless the land has been brought under the operation of the "Torrens" Act. Lands may be placed under the Real Property or the "Torrens" Act only when the titles are unexceptional.

The area of Crown grants registered under the Real Property Act and the total consideration expressed in the grants in each year since 1916 are shown below, also the area and value of private lands brought under the Act:—

Year.	Area.			Value.		
	Crown Lands.	Private Lands.	Total.	Crown Lands.	Private Lands.	Total.
	acres.	acres.	acres.	£	£	£
1916	423,303	23,352	446,655	393,749	674,678	1,068,427
1917	400,978	21,878	422,856	371,549	855,073	1,226,622
1918	388,672	26,628	415,300	371,330	1,229,323	1,600,653
1919	568,750	32,358	601,108	563,670	1,878,792	2,442,462
1920	1,022,601	30,060	1,052,661	981,996	1,800,904	2,782,900
1921	624,089	44,613	668,702	640,499	1,838,971	2,479,470

During the whole period since the Torrens Act came into operation 38,928,352 acres of Crown lands have been conveyed under its provisions, the total consideration expressed in the grants being £38,568,188; and of the private lands granted before 1862, a total area of 2,474,050 acres, valued at £48,727,820, has been brought under the Real Property Act, the deeds under earlier legislation being cancelled.

Transactions in respect of transfers and conveyances of private lands usually reflect the general condition of business throughout the State, but the published records, showing the amount of consideration paid on sales, do not



indicate the actual volume of the transactions, as the figures are swollen in some years by reason of inflation of values or the prevalence of speculation.

The following table shows for each year of the past decade the amount paid as money consideration on sales of private lands, estates sold on long terms being excluded.

Year.	Conveyances or Transfers.			Year.	Conveyances or Transfers.		
	Under Deeds Registration Act.	Under Real Property (Torrens) Act.	Total.		Under Deeds Registration Act.	Under Real Property (Torrens) Act.	Total.
	£000	£000	£000		£000	£000	£000
1912	5,502	18,380	23,882	1917	3,979	11,619	15,598
1913	4,726	16,079	20,805	1918	3,995	16,835	20,830
1914	3,613	16,585	20,198	1919	4,859	21,070	25,929
1915	3,153	11,850	15,003	1920	9,705	45,271	54,976
1916	3,370	12,189	15,559	1921	9,298	35,966	45,264

There was an appreciable drop in the value of the land sales in 1913 and in 1915, and little advance was made until 1918; then the value rose in two years from £15,598,000 to £25,929,000, or by 66 per cent. The figures for 1920 reflect a condition of unusual activity, which has been noted in regard to other phases of the financial affairs of the State, and the consideration in respect of transfers, etc., was more than twice the figure for the previous year. The amount in 1921 was very high, although it was less by 18 per cent. than in 1920.

As already mentioned, the Real Property Act provides that on the issue of a certificate the title of the person named in the certificate is indefeasible. If a transfer has been made, in error, the holder of a certificate cannot be dispossessed of the property concerned unless he has acted fraudulently. Therefore provision has been made to enable the Government to compensate persons erroneously deprived of property, and an assurance fund was created by means of a contribution of one halfpenny in the pound on the declared capital value of property when first brought under the Act and upon transmission of titles of estates of deceased persons. In 1907 the fund, amounting to £255,059, was amalgamated with the Closer Settlement Funds, to which subsequent contributions have been paid.

#### REGISTRATION OF MONEY-LENDERS.

Under the Money-lenders and Infants Loans Act, 1905, money-lenders must be registered at the Registrar-General's Office, and they must conduct their business only under their own or their firms' names, and at their registered offices. The term "money-lender" includes every person or company transacting the business of money-lending, but it excludes licensed pawn-brokers, registered friendly societies, institutions incorporated by special Act of Parliament to lend money, and banking and insurance companies. The number of registrations and renewals during the year 1921 was sixty-three.

#### MORTGAGES AND BILLS OF SALE.

Mortgages, except those regulated by the Bills of Sale Acts and the Merchant Shipping Act, may be registered at the Registrar-General's office, but there is a large number of unregistered mortgages of which records are not obtainable.

The amount of consideration for which a mortgage stands as security is not always stated in the deeds, the words "valuable consideration" or "cash credit" being inserted in cases where the advances are liable to fluctuation;

and, as this occurs frequently when the property mortgaged is of great value, an exact statement of the total advances against registered mortgages cannot be made.

Mortgages of land are registered under the Deeds Registration Act or the Real Property Act, according to the title of the property at the date of mortgage. The consideration given generally represents the principal owing; in some cases, however, it stands for the limit within which clients of banks and of other loan institutions are entitled to draw.

Liens on wool, mortgages on live stock, and liens on growing crops are registered under special Acts. Mortgages on live stock are current till discharge, and liens on wool mature at the end of each season, terminating without formal discharge. The duration of liens on agricultural and horticultural produce may not exceed one year. Such advances do not usually reach large sums, as there is an element of uncertainty in the security offered.

Mortgages on personalty other than ships and shipping appliances, wool, live stock, and growing crops, are filed at the Supreme Court. A bill of sale comprising household furniture actually in use is ineffective unless the consent of the wife or the husband of the maker or the giver of the bill is endorsed thereon. The law requires that each document must be filed within thirty days after it is made or given, otherwise the transaction is void as against execution creditors and against the official assignee or the trustee of a bankrupt estate; also that the registration must be renewed every twelve months; to prevent fraud and imposition the records are open to the inspection of the public. Information is not readily available to show the total amount of advances made annually on bills of sale.

Mortgages of registered British vessels are arranged under the Imperial Merchant Shipping Act of 1894. Transactions of this nature are divided into two classes, one in which the vessel is the sole security, and the other in which the advances are made on the security of the "account current," which may consist of ships, wharfage appliances, land, and other properties.

Particulars of the mortgages of land, crops, wool, and live stock, and of ships, effected during each of the last five years, are shown below. The figures relating to ships refer to the period of twelve months ended in June following the year stated :—

Year.	Mortgages of Land.		Mortgages on Crops, Wool, and Live Stock.				Mortgages of Ships.	
	Number.	Consideration.	Number.			Consideration.	Number.	Consideration.
			Crops.	Wool.	Live Stock.			
1917	19,011	£ 15,729,185	1,641	809	2,419	£ 3,019,962	27	£ 201,974
1918	22,625	16,401,662	1,426	1,023	3,017	1,764,928	8	31,535
1919	28,282	20,565,802	3,488	1,324	2,840	2,542,135	13	34,416
1920	39,016	35,423,499	4,620	1,198	2,855	3,055,843	15	23,494
1921	37,511	33,873,654	2,894	742	2,268	2,666,654	22	49,113

The amounts shown under the heading "Consideration" include only the cases in which a specific amount is stated in the deeds, whether the amount was actually advanced or not; but, in view of the number of mortgages in which the amount is omitted, it is probable that the totals are understated. Complete records of discharges and foreclosures are not available.

## PRIVATE WEALTH AND INCOMES.

Estimates of the wealth of New South Wales at intervals since 1891 were reviewed in detail in the 1921 issue of the Year Book, and the following statement supplies a brief summary of the estimates relating to private wealth at five-year intervals since 1891, the total value of the main classes of property being shown, and the value per head :—

Item of Wealth.	Estimated Value.					
	1891.	1901.	1906.	1911.	1916.	1921.
	£000	£000	£000	£000	£000	£000
(1) Land (unimproved value) ...	157,128	112,895	137,101	169,232	209,078	263,363
(2) Houses, etc. and other permanent improvements ...	128,300	151,798	182,549	213,057	289,715	392,073
(3) Live Stock ...	35,187	31,937	45,553	41,999	70,670	51,347
(4) Coin and Bullion ...	9,726	8,780	10,679	15,879	12,618	10,918
(5) Merchandise ...	14,730	27,190	35,393	47,268	63,924	105,297
(6) Private Railways ...	425	584	569	958	1,136	1,510
(7) Mines and Mining Plant ...	9,330	6,960	8,470	10,120	10,950	13,500
(8) Machinery and Implements ...	9,723	10,448	14,135	19,777	26,395	43,107
(9) Shipping ...	1,910	2,528	2,875	2,910	5,152	5,332
(10) Household effects, Vehicles, etc. ...	14,637	{ 11,845	16,091	26,450	31,680	48,416
(11) Personal effects ...		{ 3,603	4,825	6,166	8,697	13,067
Total Private Property...	381,096	368,568	458,240	553,816	730,015	947,930

## Per Head of Population.

	£	£	£	£	£	£
(1) Land (unimproved value) ...	137·6	82·6	92·4	101·7	110·5	124·9
(2) Houses, etc. and other permanent improvements ...	112·3	111·1	123·0	128·0	153·0	186·0
(3) Live Stock ...	30·8	23·4	30·7	25·2	37·3	24·4
(4) Coin and Bullion ...	8·5	6·4	7·2	9·5	6·7	5·2
(5) Merchandise ...	12·9	19·9	23·8	28·4	33·8	50·0
(6) Private Railways ...	·4	·4	·4	·6	·6	·7
(7) Mines and Mining Plant ...	8·2	5·1	5·7	6·1	5·8	6·4
(8) Machinery and Implements ...	8·5	7·6	9·5	11·9	13·9	20·4
(9) Shipping ...	1·7	1·8	1·9	1·8	2·7	2·5
(10) Household effects, Vehicles, etc. ...	12·8	{ 8·7	10·8	15·9	16·7	23·0
(11) Personal effects ...		{ 2·6	3·3	3·7	4·6	6·2
Total Private Property...	333·7	269·6	308·7	332·8	385·6	449·7

The high value per head of population in 1891 was due largely to inflated values of land, houses, and mining properties on account of a financial boom, which terminated two years later, causing an enormous reduction in the value assignable to those items. After a period of deflation, signs of recovery were evident in 1901, and, with a rapid improvement in economic conditions, private wealth showed continuous growth, which was exaggerated by a steady rise in prices until 1916, and thereafter by a more rapid inflation of values due to war conditions.

The composition of the private wealth has changed little since 1901. In point of value, land has become a less important item of wealth, and permanent improvements to land have become the most valuable class of property. The proportions of the private wealth represented by trading stocks and machinery respectively, have increased considerably, and the

relative values of livestock, metallic currency, and mining properties have declined. The large increase in the value of household and personal effects illustrates the growth of domestic and personal comfort.

Particulars of the distribution of wealth amongst the citizens of New South Wales may be obtained from the result of a census taken by the Commonwealth Government in 1915, when all persons aged 18 years and over were required to furnish returns if they possessed property, or held property, or were in receipt of income.

The results, which were published in detail in the 1918 and 1921 issues of the Year Book, indicate that 792,556 persons in New South Wales who furnished returns owned assets amounting in the aggregate to £468,994,322; 17·1 per cent. did not possess any assets; 80·9 per cent. had assets worth less than £5,000, constituting 48·3 per cent. of the aggregate value; and 2 per cent. owned 51·7 per cent. of the wealth. The figures are exclusive of the value of interest in trust estates, assurance policies and annuities, and prospective benefits from friendly societies, but they include assets located outside New South Wales owned by residents of the State.

#### *Estates of Deceased Persons.*

Further information relating to the distribution of wealth may be gleaned from returns relating to the estates of deceased persons which are valued for the purpose of assessing death duties. In accordance with the provisions of the Stamp Duties Act of 1920, the estates are deemed to include all the property of the deceased persons which is situated in New South Wales, including property which, within three years prior to death, was transferred as a gift, or vested in a private company or trust in consideration of shares or other interest, and moneys payable under life assurance policies, etc.

The following table shows the number of estates and the value as assessed for probate duty during the ten years ended 30th June, 1922, including intestate and other estates administered by the Public Trustee:—

Year ended 30th June.	Estates.	Amount.	Year ended 30th June.	Estates.	Amount
	No.	£		No.	£
1913	4,749	8,509,070	1918	6,476	11,859,375
1914	4,631	10,439,256	1919	6,873	11,818,222
1915	4,438	9,997,615	1920	7,172	17,106,876
1916	5,107	10,783,406	1921	5,731	12,199,419
1917	5,310	11,554,726	1922	5,458	13,883,674

Of the estates valued during the year ended June, 1922, the number belonging to female testators was 1,760, or 67·8 per cent. of the total, the value being £2,687,314 or 19·4 per cent. of the aggregate; the corresponding proportions in the previous year were 31·5 per cent. of the number and 24·1 per cent. of the value.

A rough test of the diffusion of wealth may be made by relating the number of people who died possessed of property to the total number of deaths, as in the following statement. The figures in this and in the succeeding table are exclusive of estates administered by the Curator of Intestate Estates for the years prior to 1911, and the figures for 1919 and subsequent years indicate the relation between the number of deaths in the calendar

year stated and the number of estates on which probate was granted in the twelve months ended six months later. The particulars showing estates in calendar years are not available since 1918; moreover, probate is not granted usually until several months after the death of a testator:—

Period.	Proportion of Deceased Persons with Estates per 100 Deaths.	Period.	Proportion of Deceased Persons with Estates per 100 Deaths.
1880-84	11.0	1915	22.7
1885-89	11.6	1916	25.4
1890-94	13.2	1917	32.2
1895-99	14.9	1918	37.5
1900-04	17.0	1919	27.2
1905-09	19.1	1920	27.3
1910-14	22.9	1921	27.2

The figures indicate a wide diffusion of property, but the deaths include those of a large number of minors at ages when the proportion of property owners is small; and a more convincing illustration is afforded by the next table, which shows the proportion of estates per 100 deaths of adult males. As a large number of women are possessors of property in their own right, the ratio of estates to the deaths of adults of both sexes is stated also.

Period.	Ratio of Estates per 100 Deaths of Adult Males.	Ratio of Estates per 100 Deaths of Adult Males and Females.	Period.	Ratio of Estates per 100 Deaths of Adult Males.	Ratio of Estates per 100 Deaths of Adult Males and Females.
1880-84	34.6	22.3	1915	56.1	33.6
1885-89	37.5	23.8	1916	62.5	37.2
1890-94	41.2	25.8	1917	76.0	44.8
1895-99	42.7	26.2	1918	88.1	51.8
1900-04	46.0	27.8	1919	60.9	35.7
1905-09	48.8	29.2	1920	67.6	39.5
1910-14	56.6	34.0	1921	66.3	38.4

The figures include the estates of persons who died abroad, but, except in the war years, the number was not sufficient to cause an appreciable degree of error. The proportions during the years 1917 and 1918, however, were increased considerably by reason of the inclusion of a large number of estates—about 1,500 in 1917 and nearly 2,500 in 1918—left by members of the naval and military forces; and, as the majority of these deaths occurred abroad, they were not included in the number of deaths. Making due allowance for the deaths of absentees, the apparent tendency is that the proportion of property-owners in the State is increasing.

An indication of the proportionate distribution of wealth may be gained from an analysis of the value of the estates of deceased persons, and in the

following statement the estates on which probate was granted during the last ten years have been graded according to value :—

Value of Estate.	Number of Deceased Persons leaving Property.	Value of Estates of Deceased Persons.	Proportion in each Group.	
			Number.	Value.
		£	Per cent.	Per cent.
Under £1,000 ... ..	40,411	12,083,360	72.23	10.23
£1,000 to £5,000 ... ..	11,245	25,381,166	20.10	21.48
£5,000 to £12,500 ... ..	2,701	20,537,619	4.83	17.38
£12,500 to £25,000 ... ..	921	15,923,025	1.65	13.48
£25,000 to £50,000 ... ..	419	14,080,002	0.75	11.92
£50,000 and over ... ..	248	30,146,467	0.44	25.51
Total ... ..	55,945	118,151,639	100	100

The average value per estate during the period was £2,112, and of the property-owners who died during the last ten years 72 per cent. did not possess half that amount, the total value of their property being only 10 per cent. of the aggregate; on the other hand more than half the property devised was contained in less than 3 per cent. of the estates. These figures support the evidence of the War Census of 1915 concerning the unequal distribution of wealth in New South Wales.

#### *Incomes.*

Estimates of the total amount of income earned by residents of New South Wales were formulated from the results of the censuses taken in 1891 and 1901, and were as follow :—1892, £63,350,000; 1902, £63,927,000; or £54 and £46 respectively per head of population.

In the year 1915 particulars concerning incomes were collected at a War Census undertaken by the Federal Government, and it was ascertained that at 30th June, 1915, there were 792,556 persons in New South Wales receiving incomes which in the aggregate amounted to £94,538,137 per annum; of this number 153,499 possessed incomes exceeding £156, amounting in all to £50,339,531; further details were published in the 1918 issue of the Year Book.

Similar information relating to incomes in later years is not available. Returns furnished in connection with the income taxation should afford ample data for the formulation of estimates of the aggregate gross income of the people, but information relating to returns is not available from the State Department of Taxation since 1911, and, for various reasons, the particulars contained in the annual reports of the Federal Commissioner of Taxation do not supply a satisfactory basis. For instance, the statistical tables are compiled on the basis of taxable income, and there is not a fixed relation between taxable and gross income owing to the varying incidence of deductions in individual cases; moreover, the total gross income of the persons who furnish returns does not necessarily bear a fixed relation to the total income

of all the citizens, as returns are not collected from persons whose gross incomes do not exceed a certain limit. Details of the deductions and exemptions from income taxation are shown in the chapter "Public Finance."

The latest information published by the Federal Taxation Commissioner relates to incomes earned in the year 1918-19, and the following statement has been compiled in relation to the incomes of taxpayers resident in New South Wales in that period. The figures are exclusive of particulars relating to companies, but include dividends paid to shareholders, also an allowance for the incomes of persons whose business concerns are located in more than one State. It is not possible to allocate the amount of such income to the State in which it is earned, therefore it has been assumed that the New South Wales portion is in the same ratio to the total as the population of the State bears to the population of the Commonwealth, viz., 38·6 per cent.

Grade of Taxable Income.	Total Tax-payers in each Grade.	Number of Taxpayers who derived income principally in capacity of—				Gross Income from—			Taxable Income.	Net Tax.
		Wage Earner.	Primary Producer.	Other Pursuits.	Property Owner.	Personal Exertion.	Property.	Total		
£						£000	£000	£000	£000	£000
0- 100 ..	79,355	62,717	5,111	6,277	5,250	17,455	1,772	19,227	2,873	90
101- 300 ..	41,949	25,976	5,340	5,870	4,763	15,043	2,531	17,574	7,124	184
301- 500 ..	11,387	4,596	2,303	2,542	1,946	7,130	1,490	8,620	4,381	119
501- 1,000 ..	10,380	2,826	2,513	2,881	2,160	10,157	2,518	12,675	7,261	306
1,001- 2,000 ..	4,269	755	1,068	1,367	1,079	7,327	2,263	9,590	5,840	402
2,001- 5,000 ..	1,825	176	425	579	645	6,201	2,514	8,715	5,398	704
5,001- 10,000 ..	354	19	108	103	124	2,387	1,046	3,433	2,383	552
10,001-100,000 ..	136	..	52	46	38	2,903	800	3,703	2,019	776
Over 100,000 ..	3	..	..	..	3	6	375	381	359	133
Total	149,658	97,065	16,920	19,665	16,038	68,609	15,309	83,918	37,638	3,266

From the results of the Wealth Census it may be inferred by comparison that probably not more than one-sixth of the persons in receipt of income pay Federal Income Tax. Of the total number of taxpayers in 1918-19, 64·9 per cent. derived their income principally as wage-earners, 11·3 per cent. as primary producers, 13·1 per cent. from private enterprise and miscellaneous pursuits, and 10·7 per cent. as property owners. The number of persons deriving income from personal exertion only was 78,227, or 52·3 per cent., and their total gross income, £27,265,621; from property only, 11,561, or 7·7 per cent., and their total income £6,371,445; those deriving their incomes from both sources combined was 59,870, or 40·0 per cent., and their total incomes, £50,280,560. In all 81·8 per cent. of the total gross income was derived from personal exertion and 18·2 per cent. from property. The amount of taxable income represented 44·9 per cent. of the total gross income of persons taxed. The average amount of tax imposed was 9·34 pence in the pound of the gross income of taxable persons, and 20·87 pence in the pound of taxable income.

In addition to the resident persons paying tax it was estimated that there were 1,810 absentee taxpayers with a total gross income of £1,448,960, and a total taxable income of £1,238,552, paying £104,201 net tax. The number of companies in the State which sent taxable returns to the New South Wales office was 1,465, with a gross income of £34,057,596 (including £3,390,806 paid as dividends), and a taxable income of £3,912,596, paying in all £489,067 net tax. In addition a large proportion of the returns sent to the Central Office of the Taxation Department originated in New South Wales, and if these could be allocated accurately, they would represent an addition of probably more than 50 per cent. to the amount of gross income of New South Wales companies as shown by the returns to the New South Wales office.



## POPULATION.

### EARLY ENUMERATIONS.

IN the early years of its existence satisfactory particulars of the population of the colony are not obtainable, for although frequent musters of the population took place during the first forty years, the first actual census of New South Wales was not taken until the year 1828.

The particulars elicited by these musters were scanty, and, notwithstanding heavy penalties were provided against defaulters, it is known that in most instances the enumerations were incomplete. However, the approximate population at the end of each year from 1788 is definitely ascertainable, and at quinquennial intervals from 1790 to 1825 may be stated as follows for the whole of the territory known as New South Wales, including Norfolk Island:—

Year.	Population.	Year.	Population.
1790 ...	2,800	1810 ...	10,100
1795 ...	4,500	1815 ...	13,300
1800 ...	6,200	1820 ...	25,300
1805 ...	7,400	1825 ...	33,500

In 1788, at the establishment of the colony by Governor Phillip, the population was 1,024.

After 1828 there was a rapid increase in population, induced by the steady development of the Colony, and by the expansion of settlement which followed the opening of the interior by exploration. A system of assisted immigration was introduced, and at the census of 1833 the population had increased to 60,794, an advance of 66 per cent. having occurred during the period of five years.

With the rapid expansion of settlement a great demand for labour was created, and the high rates of wages attracted many unassisted immigrants in the next twenty years. The most powerful factor in promoting development was, however, the discovery of rich goldfields in the early fifties.

Quinquennial enumerations of the population were made between 1828 and 1861. The results shown below are for the Colony of New South Wales within the boundaries existing at the time of taking the census, unless otherwise stated, aborigines being excluded.

Date of Census.	Males.	Females.	Total.	Increase.	
				Number.	Per cent.
1828—November ...	27,611	8,987	36,598	...	...
1833—September 2 ...	44,644	16,150	60,794	24,196	66·1
1836—September 2 ...	55,539	21,557	77,096	16,302	26·8
1841—March 2 ...	87,298	43,558	130,856	53,760	69·7
1846—March 2... ...	114,769	74,840	189,609	58,753	44·9
1851—March 1 { Incl. Victoria }	155,845	112,499	268,344	78,735	41·5
{ N.S.W. only }	100,217	78,451	178,668	...	...
1856—March 1 { Incl. Q'land }	150,488	119,234	269,722	...	...
{ N.S.W. only. }	139,994	112,646	252,640	73,972	41·4

A statement showing the area and population of New South Wales at each territorial re-adjustment since its foundation appears in Part "Geography" on page 1 of this Year Book.

### POPULATION, 1861-1921.

The successive censuses up to 1901 were taken under authority of the State Government, and latterly were more or less uniform with those of the other Australian States. On the establishment of the Commonwealth, the taking of the census was adopted as a Federal function, and enumerations of population are now made under authority of the Federal Government, federal machinery being utilised to secure uniformity in all States.

With the exception of the territory ceded to the Commonwealth Government in 1911, New South Wales has occupied its present boundaries since 1859, and census particulars are available at regular decennial intervals since 1861. These particulars furnish a connected and accurate summary of the development of population since that date, and a survey of the growth of the population of New South Wales, including Lord Howe Island, is shown in the following table:—

Year.	Population.	Index Number of Population.	Increase in Population since previous Census.			Number of Persons per Square Mile.
			Numerical.	Proportion.	Average Annual Rate.	
1861	350,860	100	172,192*	per cent. 91-00	per cent. 6-98	1-12
1871	503,981	144	153,121	43-64	3-69	1-61
1881	751,468	214	247,487	49-11	4-08	2-41
1891	1,132,234	323	380,766	50-67	4-19	3-64
1901	1,359,133	387	226,899	20-04	1-84	4-38
1911	1,648,746	470	289,613	21-31	1-95	5-32
1921	2,101,968	599	453,222	27-49	2-46	6-79

\*Since 1851.

Aborigines are not included in the population shown above for 1861; the numbers included in the totals of subsequent years are 983 in 1871; 1,643 in 1881; 8,280 in 1891; 4,287 in 1901; 2,012 in 1911; and 1,597 in 1921. The population of the Federal Capital Territory is excluded in 1911 and 1921.

From this and the preceding table it is apparent that a steady growth of population proceeded between 1828 and 1891, and that this growth was especially marked between 1851 and 1861, when the gold discoveries were attracting eager fortune-hunters from other parts of the world, many of whom remained as settlers. After the gold rushes had ceased the increase of population proceeded at a slower rate, but, though neither the average annual rate of increase nor the proportionate increase of that period was again attained, the actual numerical expansion in later periods has been greater. Indeed, the lull which occurred in the growth of population during the sixties developed gradually into a period of increasingly rapid expansion after 1871, and the next twenty years were, from a relative point of view, a time of unexcelled development.

It is significant that this speedy development proceeded during a period of remarkably flourishing trade, and came to an end when the trade boom ended in the commercial crisis of the early nineties.

The next twenty years were a period of little progress in the development of population, the reasons being the commercial and industrial stagnation which followed the crisis of 1893, the migratory and other losses due to the war in South Africa, and a more potent though, perhaps, subsidiary cause—the heavy decline in the birth-rate which lowered the rate of natural increase.

A new period of prosperity began early in the twentieth century, and the full weight of the trade revival was felt in the period 1911 to 1921, when the tide of population turned more definitely in favour of the growth of the State. Despite the serious effects of the war in diminishing the birth-rate, in temporarily stopping immigration, and in causing an exodus of men of reproductive ages, many of whom did not return, and despite the smaller losses occasioned by the influenza epidemic of 1919, the period showed a greater relative expansion than either of its predecessors, and by far the greatest numerical increase on record.

The estimated population at the end of the year and the mean population of New South Wales, including aborigines, for the last ten years, were as follow :—

Year.	Estimated Population at End of Year.			Mean Population.
	Males.	Females.	Total.	
1913	973,907	872,244	1,846,151	1,820,039
1914	983,918	898,553	1,882,471	1,870,473
1915	974,273	921,398	1,895,671	1,891,242
1916	947,319	939,671	1,886,990	1,893,563
1917	961,341	960,271	1,921,612	1,905,306
1918	985,734	977,758	1,963,492	1,943,493
1919	1,013,060	996,844	2,039,904	2,000,737
1920	1,068,706	1,024,511	2,093,217	2,068,790
1921	1,085,384	1,044,509	2,129,893	2,108,581
1922	1,108,653	1,066,035	2,174,688	2,151,271

*Population of Australian States.*

The following table shows the population of each State of the Commonwealth at the last two censuses, the proportion of population in each State, and the average annual rate of growth during the interval. Aborigines of full blood are excluded from account.

State or Territory.	Population, Census 1911.	Population, Census 1921.	Proportion in each State or Territory.		Average Annual Rate of Increase since Census 1911.
			1911.	1921.	
			per cent.	per cent.	per cent.
New South Wales ..	1,646,734	2,100,371	26·96	33·67	2·46
Victoria ... ..	1,315,551	1,531,280	29·53	28·19	1·52
Queensland ... ..	605,813	755,972	13·60	13·92	2·23
South Australia ... ..	408,558	495,160	9·17	9·13	1·93
Western Australia ... ..	282,114	332,732	6·33	6·06	1·55
Tasmania ... ..	191,211	213,780	4·29	3·91	1·11
Northern Territory ... ..	3,310	3,867	0·08	0·07	1·21
Federal Capital Territory	1,714	2,572	0·04	0·05	4·14
Commonwealth ..	4,455,005	5,435,734	100·00	100·00	2·60

During the period covered the population of New South Wales increased at a faster average rate than that of any other State of the Commonwealth, and the increased proportion of the population of the Commonwealth in New South Wales placed it in a position of greater relative importance among the States.

*Population of the World.*

The relationship of the population of New South Wales to that of the rest of the world may be gauged by reference to the following table, derived from the 1922 edition of the "Statesman's Year Book" and the "Report on the Fourteenth Census of the United States." The figures quoted are the latest available, but in some instances are approximations only, being founded on estimates for which little data exist.

Region or Country.	Area in square miles.	Population.	Distribution per cent.		Number of persons per square mile.
			Area.	Population.	
Continental Divisions—	000	000			
Europe ... ..	3,858	474,946	7.4	25.7	122.8
Asia ... ..	16,706	1,012,576	32.1	54.7	60.6
Africa ... ..	12,155	143,039	23.4	7.7	11.8
North America ... ..	8,549	145,855	16.4	7.9	17.2
South America ... ..	7,366	64,258	14.1	3.5	8.7
Australasia and Oceania ... ..	3,422	8,443	6.6	.5	2.5
The World* ... ..	52,056	1,849,117	100.0	100.0	35.5
Countries (including Dependencies)—					
British Empire ... ..	13,258	440,993	25.5	23.8	40.8
China ... ..	3,914	436,095	7.5	23.6	111.4
Russia† ... ..	8,166	131,546	15.7	7.1	16.1
United States ... ..	3,744	117,859	7.2	6.4	31.5
France ... ..	5,332	92,793	10.2	5.0	17.4
Japan ... ..	261	77,006	.5	4.2	295.0
Germany ... ..	250	59,857	.5	3.2	239.6
Netherlands ... ..	796	53,990	1.5	2.9	67.8
Italy ... ..	702	42,126	1.4	2.3	69.0
Brazil ... ..	3,276	30,645	6.3	1.7	9.3
Other Countries ... ..	12,357	366,207	23.7	19.8	29.7
The World* ... ..	52,056	1,849,117	100.0	100.0	35.5

\* Excluding Arctic and Antarctic regions.

† Russian Socialist Federal Soviet Republic and associated Republics.

*Growth of Population of New South Wales.*

The extent to which each source—natural increase and net immigration—has contributed to the growth of the population of New South Wales during the census periods since 1861 is shown in the following table. In calculating the increase from 1901 to 1921 the population of the Federal Capital Territory has been omitted, but the aboriginal inhabitants have been taken into consideration throughout.

Period.	Numerical Increase.			Average Annual Rate of Increase.		
	Natural.	Net Immigration.	Total.	Natural.	Net Immigration.	Total.
1861-71	106,077	47,044	153,121	per cent. 2.68	per cent. 1.27	per cent. 3.69
1871-81	140,382	107,105	247,487	2.49	1.95	4.08
1881-91	211,301	169,465	380,766	2.51	2.05	4.19
1891-1901	226,676	223	226,899	1.84	Nil.	1.84
1901-11	247,865	41,748*	289,613*	1.69	.30	1.95
1911-21	318,530	134,692	453,222	1.78	.79	2.46
1861-1921	1,250,831	500,277	1,751,108	2.14	0.59	2.71

\* Deducting population of Federal Territory (1,724).

The natural increase has been by far the greater cause of growth in the population, and, as would be expected, has provided steadily-increasing additions. The rate of natural increase fluctuated with a falling tendency throughout the period, but a very sudden fall occurred after 1890 owing to the rapid decline in the birth-rate. Immigration has always been a subordinate cause of growth, but has intermittently provided considerable additions to the population. During the sixty years 1861-1921 the net immigration amounted to only 500,277, or about two-sevenths of the total increase. Of these immigrants approximately 60 per cent. were males and about 140,000 were assisted to immigrate. Immigration proceeded rapidly until 1886, when it declined heavily, and did not revive until 1905, when the State reintroduced its policy of affording assistance to immigrants. Between the years 1892 and 1904 the State actually lost more than 10,000 inhabitants by net emigration. The rate of increase due to net immigration, measured in relation to population, has been very variable, and although considerable improvement is evident in the past thirty years the rate is still much below that of former years.

It is probable that the last decennial period would have shown a very considerable improvement in all respects had it not been for the unusual influences brought to bear by the war and the epidemic of influenza in 1919.

The actual growth of population in New South Wales during each of the last ten years was as follows:—

Year ended December—	Increase during Year.			Increase per cent. during Year.		
	Natural.	Net Immigration.	Total.	Natural.	Net Immigration.	Total.
1913	32,402	26,979	59,381	1.80	1.51	3.31
1914	34,838	1,482	36,320	1.89	.08	1.97
1915	33,275	(-) 20,675	13,200	1.76	(-) 1.07	.69
1916	32,221	(-) 40,902	(-) 8,681	1.70	(-) 2.16	(-) .46
1917	34,498	124	34,622	1.83	Nil.	1.83
1918	31,860	10,020	41,880	1.66	.52	2.18
1919	22,143	54,269	76,412	1.09	2.65	3.74
1920	33,013	20,300	53,313	1.58	.96	2.54
1921	34,600	1,876	36,476	1.62	.09	1.71
1922	36,034	8,961	44,995	1.69	.42	2.11

(-) Decrease.

This table reflects very clearly the effects of the war upon the growth of population. During the four years 1910 to 1913 natural and migratory causes had combined to produce a growth which, in point of magnitude, was unprecedented and, in point of rate, was nearly as rapid as that of any similar period in the previous fifty years. In those four years the net immigration was nearly 126,000. But the advent of war in 1914 caused a practical cessation of immigration in the latter part of the year, while at the same time the despatch of forces overseas caused a heavy drain of emigration, which increased during 1915 and 1916 so much as to cause a large excess of departures over arrivals. From 1917 to 1919 the return of troops caused an increasing flow of arrivals, and restored a temporarily absent element of population. In 1920 the last detachments of soldiers returned, and there was considerable immigration from other States. During

1921 migration returned to its ordinary channels, and the net immigration of the year was inconsiderable, but a pronounced increase was apparent in 1922. After 1914 the annual number of births diminished until 1919 and the natural increase showed a considerable falling off, especially in 1919, when the epidemic of influenza caused heavy mortality. In 1920 and 1921 the number both of births and deaths increased, but the increase of births was the greater.

### MIGRATION.

A very large movement of population takes place each year into and out of New South Wales, but is due more to the migratory habits of a large section of the inhabitants and to the movements of tourists and business men than to immigration or emigration properly so-called.

The net immigration of New South Wales is the excess of arrivals in over departures from the State, and is the result principally of intercourse with overseas countries, though of recent years the greater part of the immigrants to New South Wales have come from or through other Australian States.

The interstate and overseas movement of people to and from New South Wales in each of the past ten years is shown in the following table :—

Year.	Arrivals in New South Wales.				Departures from New South Wales.			
	Interstate.		From other Countries.	Total.	Interstate.		To other Countries.	Total.
	By Land.	By Sea.			By Land.	By Sea.		
1913	213,130	71,490	75,259	359,879	213,557	63,923	50,420	332,900
1914	233,723	75,875	67,268	376,866	235,898	71,875	66,611	374,384
1915	249,854	65,736	45,939	361,529	244,543	58,811	78,250	381,604
1916	266,751	55,423	49,354	371,528	267,114	51,624	93,692	412,430
1917	234,673	40,095	35,063	309,831	224,029	36,587	49,091	309,707
1918	270,867	28,568	38,744	338,479	263,239	25,493	39,727	328,459
1919	220,765	19,498	93,276	333,539	218,696	17,191	43,383	279,270
1920	269,934	41,134	72,515	383,583	267,318	35,904	60,061	363,283
1921	247,779	37,238	57,190	342,207	251,240	37,046	52,045	340,331
1922	241,318	36,740	53,326	331,384	247,091	36,593	38,739	322,423

Of the total movement of population, more than 80 per cent. is to and from other Australian States, and one-third of the movement to and from countries outside Australia is with New Zealand. The interstate movement over the past ten years has constituted the greater source of increase for, by this means, New South Wales has gained 48,119 inhabitants as against 15,915 from countries overseas. This result is partly due to the non-return of numbers of citizens who served on active service abroad during the war.

### Immigration.

At Common Law aliens have no legal right of admission to any British country, and immigration to and emigration from New South Wales are regulated principally by statutes of the Federal Parliament, *e.g.*, the Immigration Act (1901-20) and the Contract Immigrants Act, 1905.

Any person may be refused admission to Australia who fails to write from dictation by an officer not less than fifty words in any prescribed language; or any person who has not the prescribed certificate of health; any feeble-minded person; any person suffering from serious transmissible disease or defect, tuberculosis or certain other serious diseases; any person convicted of crime in certain circumstances; any prostitute or person living by prostitution; any advocate of revolution, assassination, or the unlawful destruction of property; for a limited period any person of German, Austro-German, Bulgarian, or Hungarian parentage and nationality, or any Turk of Ottoman race; or any person 16 years of age or over not possessed of a passport as prescribed. Should such persons gain admission, they may be deported. Usually persons formerly domiciled in the State cannot be excluded from return after temporary absence.

The overcrowding of the countries of the Old World and the comparative emptiness of new continents have given rise to problems of migration which necessarily have a direct relationship to the proper disposition of population. The migration from the Old World to the New during last century was very great, especially to the United States of America, but Australia received comparatively little of the flow, even during the period of the gold rushes. It has already been shown that the net gain of inhabitants to New South Wales by migration during the sixty years 1861-1921 was scarcely more than 500,000, and it is apparent that, at that rate of progress, the development of the State from the standpoint of population has been very slow.

In the matter of excluding undesirable immigrants, New South Wales is protected by the Federal authority. The number of persons refused admission to the Commonwealth in 1921 was 29, of whom 17 were Chinese, 5 British, 2 Cingalese, 2 Pacific Islanders, 1 Arab, 1 Russian, and 1 North American. No persons passed the dictation test during the year. The number of recorded departures of coloured persons from the Commonwealth during the year was 4,600, including 2,912 Chinese and 626 Japanese. The number of coloured persons admitted without test was 2,710, of whom 1,833 were Chinese and 282 were Japanese. Of these, 1,692 were admitted on the ground of former domicile, 269 as pearlers, 227 on passports, and 522 on other grounds..

The net immigration to New South Wales in periods of ten years since 1861 is shown on page 226. Particulars of the Contract Immigrants Act will be found in Part "Employment" of this Year Book.

#### *Assisted Immigration.*

In the early years of the colony's existence the Governors frequently discouraged free immigration, but in 1832 there was inaugurated a policy of State-assisted immigration, which was maintained until 1885. During the economic depression of the next twenty years no encouragement was given to immigrants, and assistance to migrate was not afforded again until 1905. In 1911 the Federal Government assumed the function of advertising the resources of Australia with a view to promoting voluntary immigration from the United Kingdom, Europe, and the United States of America, but the State continued to assist desirable immigrants. Activities were practically suspended during the war period and not revived until 1919. Even then, in view of the industrial position, assistance was at first restricted to nominees and domestic workers, but the Imperial Government also arranged to grant free passages to ex-service men and women and their

dependents who could produce evidence that they would be acceptable to any dominion, and that provision had been made for them. The State provided for acceptance under this scheme of selected immigrants, preference being given to agriculturists, domestic servants, and persons nominated by residents. This scheme continued in operation until the end of 1922.

With the advent of more stable industrial conditions, the system of assisted immigration was reorganised by agreement as from 1st March, 1921, when the Federal Government undertook control of the entire oversea organisation for the encouragement and selection of immigrants, and for the provision of passages to Australia. Under this agreement the State arranged to indicate, from time to time, how many settlers it could absorb.

In 1922, the State decided to embark on a more active policy of immigration, and in November an important agreement (subject to the ratification of certain clauses by the Imperial Government) was made between the State and Commonwealth. This agreement provided that:—

1. The Federal Government is to provide loans for the Government of New South Wales up to a limit of £6,000,000, such loans to be applied toward the development and settlement of certain areas of land and to promote the immigration and settlement of persons of the British race, including provision for training farms and reception establishments. The lands specially mentioned were the Murrumbidgee Irrigation Area, lands on the Murray River in the Western Division, and lands on the North Coast and downfall from the Northern Tablelands.
2. One-third of the interest on such loans is to be borne for five years by the Federal Government, the State to have the right to negotiate with the British Government regarding the remaining interest.
3. The works carried out are to include surveys of land, road, and railway construction, provision of water supply, other improvements, and, in some cases, resumption of land and works.
4. The cost of passages for immigrants is to be defrayed without charge to the State Government.
5. The Federal Government is to arrange for a loan of £300 by the British Government to each immigrant for whom a farm is provided in New South Wales. Supplementary advances made by any Government are not to raise the total advances to any individual above £500, and the total indebtedness of any settler or trainee for land is not to exceed £1,500. All advances are to be made as a business proposition through an approved agency.
6. The British Government is to contribute half the cost of training boys or men to fit them for employment or placing on a farm.
7. The State is to provide one farm for every £1,000 of the loan and to settle immigrants thereon; to see that all immigrants are either offered employment in country districts, or that those suitable are placed on the land; and to make provision for the instruction and supervision of all new settlers.
8. As it is recognised that the marketing problem is involved in the successful settlements of immigrants, the British Government is to be asked to attack it in a systematic and adequate manner.

Under the existing system of immigration, "nominated" immigrants preponderate, and the obligations of the State in receiving immigrants is no considerable. In certain cases immigrants receive instruction in rural wor



on the Government Agricultural Farm as Scheyville (near Windsor), and suitable employment is obtained in co-operation with the State Labour Exchanges.

Any immigrant who settles upon the land as owner, lessee, or labourer, within a reasonable time of his arrival, may be granted concessions in regard to railway fares and freight when travelling to the district in which he settles. These concessions may be granted also to nominated immigrants proceeding to the homes of their nominators, or travelling to take up farm work or domestic service.

The desirableness of promoting a steady influx of immigrants for the purpose of land settlement has recently attracted considerable attention among the citizens of New South Wales. A movement called the Million Farms Scheme has been inaugurated, and a number of public men have undertaken to obtain support for the furtherance of the scheme.

The following statement shows the expenditure on immigration by State grants since 1832, and the number of assisted immigrants who arrived in New South Wales, inclusive of Victoria and Queensland, before their separation. After 1905 the number of immigrants nominated by residents of the State and the number selected abroad by the Immigration Office are shown separately.

Year ended 30th June.	Expenditure, exclusive of Administration.	Immigrants Assisted.				
		Nominated.	Selected.	Total.		
				Males.	Females.	Total.
	£					
1832-1901	3,676,013	...	...	104,106	107,866	211,972
1905-1909	44,925	6,144	2,713	*	*	8,857
1910-1914	221,601	32,406	12,444	23,816	21,034	44,850
1915	24,501	2,399	1,109	1,498	2,010	3,508
1916	13,571	888	152	354	686	1,040
1917	3,690	526	60	168	418	586
1918	1,367	191	1	26	166	192
1919	1,060	119	...	21	98	119
1920	3,025	873	214	527	560	1,087
1921	6,847	4,026	560	2,220	2,366	4,586
1922	1,640	5,679	665	3,396	2,948	6,344

\* Information not available.

Since 1861 the number of assisted immigrants has been approximately 28 per cent. of the net number of immigrants to the State, and between the censuses of 1911 and 1921 the net immigration was 134,692 persons of whom approximately one-third were assisted by the State.

The figures for the last three years include ex-service immigrants to whom the Imperial Government granted free passages, viz., 663 in 1919-20, 3,394 in 1920-21, and 4,260 in 1921-22. Of these, 7,496 were nominated by residents of New South Wales, and 821 (including 593 domestic servants) were selected. Up to the end of 1922 the total number of free-passage immigrants who arrived under the Imperial ex-service scheme was 9,958. Fresh activity under the scheme was then discontinued, but further arrivals were anticipated of persons to whom free passages had been granted but who had not arrived.

The following statement shows the distribution of selected immigrants in their respective occupational classes in each of the last ten years :—

Year ended 30th June.	Rural Workers.	Domestic Servants.	Other.	Families of fore- going.	Year ended 30th June.	Rural Workers.	Domestic Servants.	Other.	Families of fore- going.
1913	1,672	549	3	275	1918	...	1	...	...
1914	542	567	...	321	1919	...	...	...	...
1915	497	477	...	135	1920	86	102	1	25
1916	8	126	...	18	1921	94	398	6	62
1917	3	51	...	6	1922	354	247	15	49

In selecting immigrants choice has been restricted latterly almost exclusively to rural workers and domestic servants. Practically all the assisted immigrants in the last ten years have come from the United Kingdom; the relatively small number from other countries is shown in the following statement :—

Year ended 30th June	Assisted Immigrants from—						Total Assisted Immigrants..		
	United Kingdom.		Other British Possessions.		Foreign Countries.				
	Nomin- ated.	Selected.	Nomin- ated.	Selected.	Nomin- ated.	Selected.	Nomin- ated.	Selected.	Total.
1913	10,997	2,482	3	...	150	17	11,150	2,499	13,649
1914	5,197	1,396	23	8	164	26	5,384	1,430	6,814
1915	2,347	1,087	9	5	43	17	2,399	1,109	3,508
1916	869	145	7	...	12	7	888	152	1,040
1917	515	60	2	...	9	...	526	60	586
1918	189	1	...	...	2	...	191	1	192
1919	118	...	1	...	...	...	119	...	119
1920	858	214	3	...	2	...	873	214	1,087
1921	4,010	560	16	...	...	...	4,026	560	4,586
1922	5,645	665	27	...	7	...	5,679	665	6,344

There are two private organisations which assist the immigration of boys and youths, viz., the Dreadnought Fund Trust and the Dr. Barnardo Homes.

The Dreadnought Fund was established in 1909 by public subscription to defray the cost of building for the Imperial Navy a war vessel of the Dreadnought type. On the institution of the Australian Navy it was decided to use part of the funds to assist the immigration of lads from 17 to 20 years of age, for the purpose of following rural pursuits. The trustees pay part of the passage money, and, if necessary, the Commonwealth and Imperial Governments advance a sum sufficient to defray the balance of the cost of bringing the lads to New South Wales. The trustees pay also the fees for a course of training at one of the State farms. Upon completion of the course the lads are placed in employment through the agency of the State Labour

Exchanges, and they repay in instalments any advances made. Operations under this scheme were suspended during the war period, but were resumed recently, 63 boys being brought to New South Wales in 1921 and 637 in 1922.

The organisation known as Dr. Barnardo Homes works in conjunction with an English institution of that name, which arranges passages and pays the passage money to Australia of boys trained in their homes and on farms in England. The local organisation places the boys with farmers, where the home conditions are found to be satisfactory. A hostel is maintained at Sandringham, Sydney, to accommodate them until they go to the country. After a probationary period of three months on the farms the boys are apprenticed until they reach the age of 21 years, and the organisation keeps constantly in touch with them during their apprenticeship. From October, 1921, when the first of these boys were landed in Sydney, to December, 1922, 97 Barnardo boys had arrived in New South Wales.

The number of persons assisted to immigrate during the past five calendar years is shown hereunder.

Year ended 31st December.	Total Assisted Immigrants.			Nominated by Relatives or Friends in New South Wales (Included in Preceding).		
	Males.	Females.	Total.	Males.	Females.	Total.
1918	31	168	199	31	168	199
1919	16	52	68	15	52	67
1920	1,526	1,743	3,269	1,335	1,380	2,715
1921	2,270	2,130	4,400	2,136	1,807	3,943
1922	4,009	3,078	7,087	3,358	2,860	6,218

The assisted immigrants arriving during the war period were principally dependents of persons already domiciled in the State. In 1919 suitable shipping space was taxed to its utmost capacity to provide transport for troops returning from the war, and, owing to the pressure of repatriation, conditions did not favour immigration. During 1920, 1921, and 1922 considerable numbers of Imperial ex-Service men were granted free passages by the Imperial Government, and many female domestic workers were granted assisted passages. In 1922 the Australian Governments began more actively to encourage immigration.

Prior to the war several steamship companies conveyed immigrant passengers from the United Kingdom at the rate of £14 per adult, and the State Government contributed from £4 to £8 toward the fares of assisted immigrants. Since the war the cost per berth has been much greater, being £34 per adult in January, 1923. Under the Federal scheme the sum of £12 is contributed by the Government in granting assisted passages, and the remainder is paid by the immigrant or his nominator.

In the case of persons nominated for assisted passages by relatives or friends in the State, nominators are required to lodge the reduced steamer fare and to guarantee that employment awaits nominees, or that adequate provision will be made for their maintenance.

#### DISTRIBUTION OF POPULATION.

The population of New South Wales is distributed in a rather remarkable manner. At the census of 1921, excluding shipping, the city proper contained

104,161 persons in a small area surrounded by an extensive group of suburbs with 794,940 inhabitants, making a total of 899,101 dwellers in the metropolis. Then scattered throughout the State were 144 of the larger towns incorporated as municipalities with a total population of 525,909; of these 18, in the County of Cumberland, contained 106,352 persons, for the most part dependent on the city for their livelihood, and 14, comprising the large mining centres of Newcastle, Broken Hill, Lithgow, and Wollongong, contained 130,882 inhabitants, leaving 288,675 in 112 of the larger rural towns. Distributed over the remainder of the State, 99 per cent. of its area, are 667,603 persons, of whom a small number live in the large unincorporated towns, and only 15,192 in the Western Division, which covers 40·5 per cent. of the area of the State.

The distribution of population at the census of 1921, together with the proportion in each division and the average population per square mile, are shown in the following table:—

Division.	Area† (including Rivers and Lakes).	Population at Census, 1921, excluding Shipping, including aborigines.		
		Total.	Proportion in Each Division.	
	sq. miles.		per cent.	per sq. mile.
Sydney ... ..	5	104,161	5·0	20,834·2
*Suburbs of Sydney ... ..	180	794,940	35·0	4,416·3
Metropolis ... ..	185	899,101	43·0	4,860·0
Extra Metropolitan Municipalities and Shires.	515	100,823	4·8	195·7
Metropolitan Area as defined in Local Government Act.	700	999,924	47·8	1,428·4
Country Municipalities ... ..	2,636	457,725	21·9	173·6
Country Shires ... ..	180,621‡	619,661	29·6	3·4
Western Division (Part unincor- porated).	125,294	15,192	0·7	0·1
Lord Howe Island ... ..	5	111	0·0	22·2
Total, New South Wales ...	309,256‡	2,092,613	100·0	6·8

\* Including Ku-ring-gai Shire, area 36 sq. miles, population 19,213.

† Excludes 176 sq. miles being water area of principal harbours. ‡ Excludes Federal Territory 949 sq. miles,

The population of the metropolis represents more than two-fifths of the total population; less than one-quarter of the people reside in the country municipalities, and less than one-third in the remaining rural districts.

The density of population diminishes rapidly from city, suburban, country urban to rural districts. The average density of population in New South Wales is greater than that of any other State of the Commonwealth except Victoria and Tasmania.

The lowness of the average in New South Wales—6·8 per square mile—is due largely to the inclusion of the extensive and practically unpeopled Western Division, much of which must remain sparsely settled until means are found to overcome its natural disability of a low average rainfall. The average density of population in the Eastern and Central Divisions of the State is 11·2 persons per square mile.

### *Urban and Rural Population.*

A comparison of the urban and rural elements of the population of the State at the last four censuses reveals that the population of New South

Wales, in common with that of most other countries of the world, tends more and more to congregate in metropolitan and urban centres. In the following table the population shown represents the total under each classification at each census, the shipping and aboriginal elements being omitted from the four main headings and shown separately. The number of municipalities and quasi-urban localities increased throughout the period, and the growth shown is due in part to the inclusion of new settlements and in part to the growth of settlements existing at the previous census.

Divisions.	1891.	1901.	1911.	1921.
1. Metropolis ... ..	383,283	480,976	629,503	899,059
2. Municipalities outside the Metropolis..	304,905	370,934	421,714	525,708
3. Quasi-urban localities or settlements with population exceeding 500 ...	51,963	81,484	175,303	190,556
4. Remainder of State (Rural, &c.) ...	376,643†	411,791†	412,058†	475,582†
5. Total ... ..	1,116,794	1,345,185	1,638,578	2,090,905
6. Federal Capital Area*... ..	1,456	1,535	1,724	2,572
7. Shipping... ..	5,649	8,026	8,051	9,355
8. Lord Howe Island ... ..	55	100	105	111
9. Aborigines ... ..	8,280	4,287	2,012	1,597
10. Total Population, New South Wales†	1,132,234	1,359,133	1,650,470	2,104,540
Proportion per cent. to total (5) of—				
1. Metropolis ... ..	34·3	35·7	38·4	43·0
2. Municipalities outside Metropolis	27·3	27·5	25·7	25·1
3. Quasi-urban... ..	4·6	6·1	10·7	9·1
4. Rural, &c. ... ..	33·8	30·7	25·2	22·8
	100·0	100·0	100·0	100·0

\* Ceded to Commonwealth, 1 January, 1911.

† Including Federal Capital Area.

† Includes persons living in portions of municipal towns outside boundaries of municipality (numbering 43,430 in 1921).

It is not to be expected, in a young country such as New South Wales in the early stages of development, that population would show a decline in any respect. But while decline is not shown in the above table in terms of population, the proportion of inhabitants in respective divisions shows some rather surprising movements. Over the period of thirty years the total population increased by 85·8 per cent., which represents an average growth for all divisions. The population of the metropolitan area grew more than that of any other division—134·6 per cent., the municipalities 72·4 per cent., the quasi-urban 266·7 per cent., and rural only 26·3 per cent.

The outstanding features of the population at the present time are the dominance of the metropolitan element and the diminishing relative importance of the country towns, incorporated and unincorporated, and of the rural proportions.

The growth of population during the past ten years has not been uniform in all parts of the State, and in some districts retrogression has been experienced. While population in the municipalities of the metropolitan areas has grown very rapidly—in some cases doubling and even trebling in magnitude—few other centres have made appreciable headway except Newcastle, the second largest city, whose inhabitants increased from 55,380 to 86,267, or by 55·7 per

cent.; Wollongong, where the increase was 43·5 per cent.; Katoomba, 83·8 per cent.; Lithgow, 61·9 per cent.; and Orange, 75·3 per cent. But some expansion occurred also in nearly seventy country municipalities, while forty-five others made no headway, and even showed signs of decay. Between 1911 and 1921 the combined increase of population in all towns incorporated as municipalities was 343,230, or 32 per cent., and in shires and unincorporated areas 109,992, or 19 per cent. The population of shires is largely rural, and between 1911 and 1921 no less than fifty-six out of 136 shires either lost or did not gain inhabitants.

Evidence that emigration has occurred to a serious extent from most of the country districts during the past thirty years is furnished by the following table compiled on a county basis, in which separate account is taken in each district, of migration and of natural increase, as factors affecting the growth of population.

Division.	Population at Census (including aborigines.)				Total Increase in Population.		
	1891.	1901.	1911.	1921.	1891 to 1901.	1901 to 1911.	1911 to 1921.
Cumberland* .. .. .	451,311	569,625	727,627	1,068,941	118,314	158,002	341,314
Coast—							
North .. .. .	50,874	65,047	97,630	119,053	14,173	32,583	21,423
Hunter and Manning .. .. .	138,412	157,539	192,903	252,645	19,127	25,364	59,742
South .. .. .	70,399	73,112	70,826	78,838†	2,713	(—)2,286	8,012
Tableland—							
North .. .. .	42,056	46,969	54,355	53,834	4,913	7,386	(—) 471
Central .. .. .	90,083	101,284	111,252	122,196	11,201	9,968	10,944
South .. .. .	49,794	51,195	47,639†	51,101†	1,401	(—)3,556	3,462
Slopes—							
North .. .. .	32,073	43,572	58,895	55,087	11,499	15,323	(—) 3,808
Central .. .. .	31,491	38,825	44,046	46,670	7,334	5,221	2,624
South .. .. .	55,776	66,355	77,203	82,259	10,579	10,848	5,656
Plains—							
North .. .. .	9,341	12,806	17,258	17,688	3,465	4,452	430
Central .. .. .	20,935	28,994	32,488	33,179	8,059	2,494	691
Riverina .. .. .	35,704	45,562	56,857	72,552	9,648	11,505	15,695
Western Division .. .. .	53,985	58,458	59,767	47,875	4,473	1,509	(—)11,892
Whole State .. .. .	1,132,234	1,859,133	1,648,746†	2,101,968†	226,899	£89,613	453,222

† Excludes Federal Territory.

(—) Denotes decrease.

Division.	Natural Increase.			Net Immigration.		
	1891 to 1901.	1901 to 1911.	1911 to 1921.	1891 to 1901.	1901 to 1911.	1911 to 1921.
Cumberland* .. .. .	74,834	82,646	124,487	43,480	75,356	216,827
Coast—						
North .. .. .	15,003	20,240	26,400	(—) 590	12,343	(—) 4,977
Hunter and Manning .. .. .	29,485	32,711	42,799	(—)10,358	2,653	16,943
South .. .. .	15,920	14,365	14,269	(—)13,207	(—)16,651	(—) 6,248
Tableland—						
North .. .. .	11,200	11,080	12,413	(—) 6,287	(—) 4,594	(—) 12,884
Central .. .. .	19,880	20,138	20,655	(—) 8,679	(—)10,170	(—) 9,711
South .. .. .	8,909	7,518	7,864	(—) 7,508	(—)11,074	(—) 4,402
Slopes—						
North .. .. .	7,505	9,251	10,663	3,994	6,072	(—) 14,471
Central .. .. .	6,755	6,072	10,479	579	(—) 1,451	(—) 7,855
South .. .. .	15,242	16,499	17,942	(—) 4,063	(—) 5,651	(—) 12,886
Plains—						
North .. .. .	4,179	4,748	5,569	(—) 714	(—) 296	(—) 5,139
Central .. .. .	3,701	4,607	4,268	4,358	(—) 1,113	(—) 3,577
Riverina .. .. .	5,709	6,438	11,851	3,939	5,067	3,844
Western Division .. .. .	8,354	10,052	8,880	(—) 3,881	(—) 8,743	(—) 20,772
Whole State .. .. .	226,676	247,865	318,530	223	41,748	134,692

(—) Denotes net emigration.

\* Embracing the metropolis.

It is apparent that emigration has occurred at one interval or another from every division of the State except the small area embraced by the County of Cumberland, containing the metropolis, which, throughout the whole period of thirty years, has absorbed far more population from country districts than they gained by immigration oversea and interstate. Thus, while the net immigration to the State between 1891 and 1921 was 176,663, the net immigration to the County of Cumberland was 335,663, and the growth of population in the County of Cumberland accelerated very rapidly between 1911 and 1921.

This occurrence has had serious ill-effects on the development of the country divisions. So far from gaining inhabitants, between 1911 and 1921 by migration the divisions of Northern Tableland, Northern Slopes, and Western Plains each lost the whole of their natural increase, and, in addition, proportions of the population they had held in 1911, amounting to 19·9 per cent. in the case of the Western Division and 6·8 per cent. in the Northern Slopes. This serious condition of affairs is revealed at its worst by considering the net immigration apart from natural increase.

Between 1911 and 1921 the County of Cumberland gained 216,827 inhabitants by migration, but to only two country divisions was there net immigration; these were the Hunter and Manning Division, which gained 16,943 and the Riverina 3,814. For each of these increments there was a special cause. Migrants flowed freely from nearly every part of the State to the metropolis, but only the new manufacturing enterprises at Newcastle, the development of coal-fields in the Hunter Valley, and the establishment of settlers on the Murrumbidgee Irrigation Area attracted effective migrants to country districts. No less than eleven divisions of the State, covering 245,950 square miles, lost population by migration, the total loss amounting to more than 82,000 during the ten years 1911-1921.

The losses of population by migration were most severe in the following districts, where the proportions of net emigration to the population in 1911 were as shown:—Western Division, 34·8 per cent.; Northern Slopes, 24·6 per cent.; Northern Tableland, 23·7 per cent.; and South-Western Slopes, 16·6 per cent.

During the past thirty years there has been a continuous flow of population from the South Coast, from the whole of the Tableland Divisions, and from the Western Division. During the past ten years emigration from country divisions was more pronounced than ever before, and occurred from every rural district of the State considered in a general way, except where special settlement was brought about by the Murrumbidgee Irrigation project.

### *The Population of the Metropolis.*

The Metropolis includes the City of Sydney, forty municipalities surrounding it, the Ku-ring-gai Shire, and the islands of Port Jackson. It embraces an area of 185 square miles. The boundaries may be described as follow:—On the east, the sea coast; on the south, the waters of Botany Bay and George's River; on the west, the western boundaries of Hurstville, Canterbury, Enfield, Strathfield, Homebush, Concord, and Ryde municipalities; on the north, the northern boundaries of Eastwood and Ryde municipalities, the western and eastern boundaries of Ku-ring-gai Shire, the north-eastern boundary of Willoughby, and the northern boundary of Manly municipalities. The habitations within these limits are fairly continuous.

The following statement shows the population of each municipality of the Metropolis, and of Ku-ring-gai Shire, at the censuses of 1911 and 1921, including aborigines and shipping:—

Municipality.	Population.		Municipality.	Population.	
	Census, 1911.	Census, 1921.		Census, 1911.	Census, 1921.
City of Sydney ...	119,774	111,059	Manly ...	10,465	18,507
Alexandria ...	10,123	9,793	Marrickville ...	30,653	42,240
Annandale ...	11,241	12,648	Mascot ...	5,836	10,929
Ashfield ...	20,431	33,637	Mosman ...	13,243	20,063
Balmain ...	32,038	32,122	Newtown ...	26,498	28,169
Bexley ...	6,517	14,746	North Sydney ...	34,648	48,446
Botany ...	4,409	6,214	Paddington ...	24,317	26,364
Burwood ...	9,382	15,711	Petersham ...	21,712	26,236
Canterbury ...	11,335	37,639	Randwick ...	19,475	50,849
Concord ...	4,076	11,013	Redfern ...	24,427	23,978
Darlington ...	3,816	3,651	Rockdale ...	14,095	25,190
Drummoyne ...	8,678	18,764	Ryde ...	5,281	14,855
Eastwood... ..	968	2,133	St. Peter's ...	8,410	12,700
Enfield ...	3,444	8,530	Strathfield ...	4,046	7,594
Erskineville ...	7,299	7,553	Vaucluse ...	1,673	3,730
Glebe ...	21,944	22,772	Waterloo ...	10,072	11,199
Homebush ...	676	1,622	Waverley ...	19,832	36,797
Hunter's Hill ...	5,019	7,334	Willoughby ...	13,037	28,074
Hurstville ...	6,533	13,394	Woollahra ...	16,992	25,461
Kogarah ...	6,954	18,226	Ku-ring-gai Shire ...	9,459	19,213
Lane Cove ...	3,306	7,592			
Leichhardt ...	24,254	29,356	Total ...	636,388	906,103

It is apparent that a number of these suburbs embracing those longest established and nearest the city have attained their maximum development, and that the rate of growth is now greatest in the more remote municipalities such as Bexley, Canterbury, Hurstville, Kogarah, Randwick, and Ryde.

In addition to these suburbs there are, in close proximity to the city, a number of important centres of population of a more or less suburban character, since important proportions of their inhabitants gain their livelihood in the city. An extended definition of the metropolitan area was given in the Local Government Act of 1919 (Schedule Four), and included the following additional localities, whose populations, including aborigines and shipping, were as shown:—

Municipalities.	Population.		Shires.	Population.	
	Census, April, 1911.	Census, April, 1921.		Census, April, 1911.	Census, April, 1921.
Auburn ...	5,559	13,563	Hornsby ...	8,907	15,291
Bankstown ...	2,039	10,670	Sutherland ...	2,896	7,707
Dundas ...	1,136	3,523	Warringah ...	2,823	9,644
Errington and Rydalmere ...	1,716	1,981	Extra-Metropolitan Shires...	14,626	32,642
Granville ...	7,231	13,328	Population of Metropolis as shown above ...	636,388	906,103
Lidcombe ...	5,419	10,524			
Parramatta ...	12,476	14,595			
Extra-Metropolitan Municipalities ...	35,576	68,184	Metropolitan Area as defined in Local Government Act	686,590	1,006,929



The population of the metropolis, including aboriginals and shipping, at census periods is shown in the following table, together with the proportion which the metropolitan population bears to that of the whole State:—

Year.	Population at Census.			Increase.		Males per cent.	Proportion of Population of State in Metropoh.
	Males.	Females.	Total.	Numerical.	Per cent.		
1861	47,778	49,283	97,061	43,137	80.00	49.21	per cent. 27.7
1871	68,266	70,913	139,179	42,118	43.39	49.05	27.6
1881	114,936	112,230	227,166	87,987	63.22	50.60	30.2
1891	197,550	189,884	387,434	160,268	70.55	50.99	34.2
1901	241,700	246,232	487,932	100,498	25.94	49.54	35.9
1911	312,074	324,279	636,353	148,421	30.42	49.04	38.5
1921	439,691	463,412	906,103	269,750	42.34	48.54	43.1

The proportion of the population of the State resident in the metropolis has increased rapidly in the past half-century and especially in the last ten years. Since 1891 the proportion of females in the metropolis has increased, so that at the census of 1921 there was an excess of three females in every hundred of the population.

The population of the Metropolis is not distributed evenly, as 414,259 persons, or 43.4 per cent. of the inhabitants, live in the central portions, which comprise 13,137 acres, or less than one-tenth of the total area. The density of population in this area is 31.6 persons per acre, while in some outlying suburbs there is less than one person to the acre. The scattered nature of the population in these cases indicates rather that room exists for development than that dwellings are widely and evenly distributed.

The following table shows the manner of the distribution of population in each group of municipalities of the metropolitan area, as defined in the Local Government Act. It includes a comparison of the average number of persons per acre at each census since 1901, and in this way indicates the relative development of each district:—

Municipalities of Metropolitan Area.	Population at Census 1921.*	Area.	Number of Occupied Dwellings at Census, 1921.	Number of Persons per Occupied Dwelling.	Average Number of Persons per acre.		
					1901.	1911.	1921.
Sydney ... ..	104,161	3,327	17,335	†6.01	36.4	33.8	31.2
Suburbs—							
North-western ... ..	96,865	2,983	20,059	4.83	25.2	30.0	32.5
West-central ... ..	48,422	1,504	9,989	4.85	22.9	28.0	32.2
East-central ... ..	65,764	6,728	12,963	†5.07	8.0	8.7	9.8
Eastern ... ..	143,178	13,126	29,179	4.91	4.3	6.3	10.9
Western ... ..	165,345	15,115	35,107	4.72	4.5	6.8	10.9
Southern ... ..	109,195	26,524	23,758	4.60	.9	1.7	4.1
Northern ‡ ... ..	166,171	25,952	31,092	5.34	1.9	3.3	6.4
Municipalities of Metropolis	899,101	95,259	179,482	5.01	5.1	6.5	9.4
Extra Metropolitan Municipalities ... ..	68,184	38,478	13,418	†5.08	.7	.9	1.8
Municipalities of Metropolitan Area as defined in Local Government Act ...	967,285	133,737	192,900	5.01	3.9	4.9	7.2

\* Excludes shipping.

† Includes large institutions.

‡ Includes Ku-ring-gai Shire.

Population is being driven from the city proper by the steady growth of business establishments which replace dwelling-houses. The average number of persons per occupied dwelling is fairly uniform in all municipalities except where institutions with a large number of occupants exist. The density of population, however, is not so uniform, as is clear from a comparison of the various districts. Of the municipalities, Darlington, with a population of 82.9 persons per acre, is the most congested, followed by Paddington 65.4, Newtown 63.8, Redfern 55.0, Erskineville 45.5, and Glebe 43.7. Similar particulars of all municipalities of the metropolitan area are published in Part "Population" of the Statistical Register of New South Wales.

The growth of the population of the Metropolis has proceeded at a very rapid rate during the past ten years over the whole of its wide area with the exception of the city proper, of Darlington, and of the more congested municipalities. The comparatively small number of dwellings and of persons per acre in many easily accessible municipalities indicates that room exists for a continuance of this rapid expansion within the present boundaries if the needs of the immediate future demand it. Assuming that the average existing in the inlying suburbs of six houses per acre were reached throughout the area, and that the existing average of about five persons per dwelling were maintained, there is room within the present metropolitan area, as defined in the Local Government Act, for a population of approximately 4,000,000 persons without undue crowding.

The populations of the capital cities (including suburbs) of the States of the Commonwealth are shown below :—

Metropolis.	Census, 1911.	Census, 1921.			Proportion to Population of Whole State.† 1921.
		Males.	Females.	Total.	
Sydney ... ..	629,503	433,492	465,567	899,059	per cent. 42.80
Melbourne ... ..	588,971	359,500	406,965	766,465	50.05
Brisbane ... ..	139,480	101,045	108,901	209,946	27.77
Adelaide ... ..	189,646	120,770	134,605	255,375	51.57
Perth ... ..	106,792	75,088	79,785	154,873	46.55
Hobart ... ..	39,937	24,711	27,650	52,361	24.49

† Including shipping.

These populations are exclusive of shipping and aboriginals, and for this reason the population of Sydney differs from that shown in previous tables.

#### THE TOWNS OF NEW SOUTH WALES.

As would be expected from the nature of the industries of the State there are in New South Wales comparatively few large towns. Outside the metropolitan area, the only towns of outstanding importance are Newcastle and Broken Hill, and the existence of both is due to the rich mineral deposits in their neighbourhood. Lithgow, the fifth largest town, is also dependent on mining for its existence. Apart from these and the centres in the County of Cumberland closely dependent upon the city, there are only

two country centres with a population exceeding 10,000; twelve, including two unincorporated, between 5,000 and 10,000; and twenty-five, including two unincorporated, between 3,000 and 5,000.

The following table affords a comparison of the populations at the last four censuses of the towns, which at the census of 1921 had more than 3,000 inhabitants, including aboriginals and shipping, the metropolitan and closely-dependent municipalities being shown first :—

Municipality.	Population at Census.				Increase Per Cent.	
	1891.	1901.	1911.	1921.	1901-1911.	1911-1921.
Sydney and Suburbs†	387,331	487,900	636,388	906,103	30·43	42·33
Parramatta†	11,677	12,560	12,476	14,595	(-) 67	16·98
Auburn*†	2,026	2,948	5,559	13,563	88·57	143·98
Granville†	4,248	5,094	7,231	13,328	41·95	84·32
Bankstown*†	108	1,246	2,039	10,670	63·64	423·30
Lidcombe†	2,684	4,496	5,410	10,524	20·53	94·17
Dundas†	881	1,087	1,136	3,523	45	210·12
Newcastle and Suburbs	50,662	54,991	55,380	86,267	71	55·77
Broken Hill	19,789	27,500	30,974	26,333	12·63	(-) 14·97
Lithgow	3,865	5,268	8,196	13,275	55·58	61·97
Goulburn	10,916	10,612	10,023	12,934	(-) 5·55	29·04
Maitland	10,214	10,073	11,318	12,009	2·43	6·10
Bathurst	9,162	9,223	8,578	9,441	(-) 6·99	10·05
Katoomba	1,592	2,270	4,924	9,057	116·91	83·90
Lismore	2,925	4,464	7,382	8,712	65·37	17·85
Albury	5,447	5,821	6,309	7,752	8·38	22·86
Wagga Wagga	4,596	5,108	6,419	7,679	25·67	21·19
Orange	5,064	6,331	6,722	7,398	6·18	10·06
Cessnock§	203	165	3,957	7,343	23·25	85·57
Tamworth	4,602	5,799	7,147	7,264	23·25	1·64
Wollongong	3,058	3,554	4,673	6,708	31·49	43·55
Kurri Kurri§	...	...	4,154	5,542	...	33·41
Armidale	3,826	4,249	4,739	5,486	11·53	15·76
Dubbo	3,551	3,409	4,455	5,032	30·68	12·95
Glen Innes	2,532	2,918	4,089	4,974	40·13	21·64
Grafton	3,618	4,173	4,685	4,609	12·27	(-) 0·02
Forbes	3,011	4,294	4,436	4,376	3·31	(-) 1·35
Inverell	2,534	3,293	4,549	4,369	38·14	(-) 3·96
Hornsby†§	423	1,818	2,213	4,096	21·72	85·09
Parkes	2,449	3,181	2,935	3,941	(-) 7·73	34·28
Wellington	1,545	2,984	3,958	3,924	32·64	(-) 86
Windsor†	2,033	2,039	3,466	3,808	69·99	9·87
Cowra	1,546	1,811	3,292	3,732	81·78	13·37
Kempsey	2,194	2,329	2,947	3,613	26·54	22·60
Penrith†	3,099	3,559	3,683	3,605	4·07	(-) 2·14
Junee	1,682	2,190	2,531	3,560	15·57	40·66
Cootamundra	2,026	2,424	2,967	3,531	22·40	19·01
Casino	1,486	1,926	3,429	3,461	78·04	76
Young	2,746	2,755	3,140	3,284	13·97	4·55
Singleton	2,595	2,872	2,999	3,275	4·42	9·04
Leeton§	...	...	...	3,242	...	...
Mudgee....	2,410	2,789	2,942	3,170	5·49	7·75
Temora	915	1,603	3,784	3,049	73·67	9·48
Moree	1,143	2,298	2,937	3,028	27·81	2·83
Narrandera	1,815	2,255	2,374	3,012	5·29	26·87
Towns in County Cumberland	413,910	522,727	679,610	983,815	30·01	44·76
Newcastle and Suburbs	50,662	54,991	55,380	86,267	71	55·77
Other Country Towns	125,057	149,941	187,964	218,120	26·70	16·05
Total population in towns of over 3,000 inhabitants.	589,629	727,659	922,954	1,288,202	26·84	39·57

\* Not incorporated 1891.

† Towns in County Cumberland.

§ Locality, not incorporated, excludes Aborigines.

(-) Denotes decrease.

The total population of these larger towns has grown at a fairly uniform rate during the whole of the period of thirty years, and the towns of County Cumberland have shown an especially rapid increase in the last ten years. Newcastle, after twenty years of slow progress, made rapid headway between 1911 and 1921, largely on account of the growth of its manufacturing industries. The other rural towns, on the whole, have maintained a steady growth throughout, but the decline of the silver-lead mining industry—due largely to derangement of the markets of the world—has arrested the growth of Broken Hill, which has actually lost population since the year 1911. Lithgow, a coal-mining and partly manufacturing town, has continued to grow rapidly. Goulburn has developed, after twenty years of stagnation, into the leading town of the interior not dependent on mining; and Katoomba, a residential town, 60 miles from Sydney, has also grown rapidly.

#### SEX DISTRIBUTION.

As is the case in most of the younger countries, the population of New South Wales contains a surplus of males over females, but in older countries females are usually the more numerous.

The disparity in New South Wales is brought about by the operation of several factors. The early development of the colony depended on the pastoral and mining industries, and this, combined with its remoteness from the Old World, led to far greater immigration of men than of women. In recent years the predominance of males among immigrants has tended to increase the disparity between the sexes.

On the other hand, despite the excess of male over female births, the higher rate of mortality among males renders the natural increase of females greater than that of males. Thus, during the ten years, 1911 to 1920, the natural increase consisted of 149,149 males and 168,706 females. As a consequence the excess of males is diminishing and the diminution was hastened by the war. The distribution of the sexes at each census from 1861 to 1921 was as follows:—

Year.	Distribution of Population in Sexes (including aboriginals).				Males per 100 Females.
	Males.	Females.	Proportion of Males.	Proportion of Females.	
1861	198,488	152,372	per cent. 56·57	per cent. 43·43	No. 130
1871	275,551	228,430	54·67	45·33	121
1881	411,149	340,319	54·86	45·14	121
1891	612,562	519,672	54·14	45·86	118
1901	712,456	646,677	52·42	47·58	110
1911	858,850	789,896	52·09	47·91	109
1921	1,072,424	1,029,544	51·20	48·80	104

From 1871 to 1881 the proportion of males remained constant at about 55 per cent., but immigration was checked towards the end of the next decade, and in 1891 the proportion of males had decreased slightly. During the following period there was very little immigration, and by 1901 the

difference between the sexes had become less than at any previous period, the proportion of males being 52.42 per cent., or 110 males to every 100 females. At the census of 1911 the proportions were approximately the same, as immigration had revived in 1905; but the census of 1921 showed a further pronounced approach to equality between the sexes, due in part to war casualties.

The excess of males in the population will depend in the future largely on the existing age constitution of each sex. The following table shows the excess of males over females at each age-group as ascertained at the censuses of 1911 and 1921, excluding aborigines:—

Age Group.	Excess of Males.		Age Group.	Excess of Males.	
	1911.	1921.		1911.	1921.
Years.			Years.		
0-4	3,140	3,718	50-54	9,381	6,648
5-9	2,017	3,144	55-59	6,639	6,843
10-14	1,138	2,732	60-64	3,671	5,283
15-19	1,966	1,774	65-69	2,356	3,606
20-24	4,464	(—) 5,420	70-74	2,026	1,013
25-29	4,040	(—) 3,794	75-79	1,416	268
30-34	4,332	4,058	80-84	496	35
35-39	4,413	3,851	85 and over	(—) 60	(—) 52
40-44	7,485	4,510	Not stated	687	418
45-49	9,055	3,996	Total ...	68,662	42,631

(—) Excess of Females.

The total decrease in the excess of males over females (26,031) is approximately equal to the number of deaths of soldier-citizens during the war plus the excess of deaths among males during the epidemic of influenza in 1919, while a further important factor was the special immigration of war brides. The incidence of these unusual factors is most apparent at age-groups 20-24 and 25-29. Although the tendency of the natural increase to maintain the predominance of males was greater in the latter than in the previous decade, it is clear, from the fact that the greatest surpluses of males are now at ages 50 to 65, that as time passes the proportion of females will continue to increase at a faster rate than the proportion of males in accordance with the general tendency at all age-groups. The relative excess of males will, therefore, decline still further unless there is an increase in the rate of natural increase of males (a rather remote possibility), or an accession of male immigrants in appreciably greater numbers than females.

#### AGES OF THE POPULATION.

The age constitution of a population is found to vary from census to census under the influence of three principal factors—(a) fluctuations in the birth rate; (b) irregularity in the flow of immigrants; (c) losses occasioned by war and epidemics.

The following table shows the number of persons in each quinquennia age-group at each of the last two censuses, aborigines of full blood being excluded :—

Age last Birthday.	3rd April, 1911.			4th April, 1921.		
	Males.	Females.	Total.	Males.	Females.	Total.
Years.						
0-4	102,003	98,863	200,866	121,529	117,811	239,340
5-9	85,137	83,120	168,257	118,284	115,140	233,424
10-14	79,136	77,998	157,134	104,166	101,434	205,600
15-19	82,981	81,015	163,996	88,476	86,702	175,178
20-24	87,314	82,850	170,164	83,333	88,753	172,086
25-29	76,430	72,890	148,820	87,361	91,155	178,516
30-34	61,228	59,896	124,124	92,215	88,157	180,372
35-39	55,121	50,708	105,829	79,737	75,886	155,623
40-44	50,940	43,455	94,395	66,785	62,275	129,060
45-49	46,638	37,583	84,221	54,723	50,727	105,450
50-54	39,345	29,964	69,309	49,235	42,587	91,822
55-59	27,544	20,905	48,449	41,877	35,034	76,911
60-64	20,023	16,352	36,375	33,694	28,411	62,105
65-69	15,370	13,014	28,384	21,737	18,131	39,868
70-74	10,611	8,585	19,196	13,030	12,017	25,047
75-79	6,658	5,242	11,900	7,698	7,430	15,128
80-84	2,719	2,223	4,942	3,402	3,367	6,769
85 and over	1,010	1,070	2,080	1,580	1,632	3,212
Not stated	4,490	3,803	8,293	2,639	2,221	4,860
Total ...	857,698	789,036	1,646,734	1,071,501	1,028,870	2,100,371

There has been a numerical increase in every age-group, but it has been by no means uniform, and the number of males between the ages of 20 and 25 years has declined heavily in consequence of the war. The relationship of males to females at each age-group is discussed above. \*

A clearer conception of the age constitution of the population may, however, be gained from consideration of the proportional strength of the numbers of persons in each age-group. The following table provides a comparison covering the past seven censuses :—

Age Group.	Proportion per cent. of Total Population at Census.						
	1861.	1871.	1881.	1891.	1901.	1911.	1921.
Years.							
0-4	16·22	16·30	14·84	14·69	11·73	12·26	11·42
5-9	12·10	14·02	13·22	12·77	12·26	10·27	11·13
10-14	10·38	11·47	11·81	10·92	11·93	9·59	9·81
15-19	9·78	8·48	10·11	9·62	10·43	10·01	8·36
20-24	9·70	8·40	9·95	9·86	9·45	10·38	8·21
25-29	10·00	8·67	8·08	9·47	8·34	9·08	8·52
30-34	7·80	7·56	6·76	7·86	7·36	7·58	8·61
35-39	5·82	6·56	6·19	5·99	6·96	6·46	7·43
40-44	5·73	5·15	5·28	4·73	5·80	5·76	6·16
45-49	4·17	3·61	4·18	4·03	4·24	5·14	5·03
50-54	3·39	3·54	3·27	3·31	3·33	4·23	4·38
55-59	1·81	2·26	2·00	2·43	2·59	2·96	3·67
60-64	1·71	1·85	1·85	1·80	2·14	2·22	2·97
65-69	·64	·97	1·11	1·05	1·65	1·73	1·91
70-74	·42	·72	·74	·77	·96	1·17	1·20
75-79	·18	·25	·35	·42	·47	·73	·72
80-84	·15	·19	·26	·19	·25	·30	·32
85 and over				·09	·11	·13	·15
Total ...	100·00	100·00	100·00	100·00	100·00	100·00	100·00
Under 15	38·70	41·79	39·87	38·38	35·92	32·12	32·37
15-64	59·91	56·08	57·67	59·10	60·64	63·82	63·33
65 and over	1·39	2·13	2·46	2·52	3·44	4·06	4·30
Over 21 ...	*	48·06	48·02	49·93	51·62	55·77	57·57

\* Not available.

The age constitution of the population in 1861 was rendered abnormal by the large influx of persons in early manhood during the gold rushes of the preceding decade and by the large number of births in the preceding quinquennium, but, thereafter, as the result of a more steady growth of the population, it became more uniform. The births commenced to decline seriously in 1889, and although the effect of this influence was complicated by the arrival of immigrants, its extent is clearly shown in the proportion to the population of children born in the decennium preceding each census and surviving or remaining in the State at the date of the census. These were:— In 1871, 30·32 per cent.; 1881, 28·06 per cent.; 1891, 27·46 per cent.; 1901, 23·99 per cent.; 1911, 22·53 per cent.; and in 1921, 22·55 per cent.

During this period of fifty years the proportion of children under 15 years of age to the total population fell from 41·8 per cent. to 32·4 per cent. As a consequence of this development the proportions both of aged persons (over 65 years of age) and of persons at what may be called the productive ages (15 to 64 years) increased considerably. However, the combined proportion of persons of dependent age (under 15 and over 64 years) decreased from 43·92 per cent. in 1871 to 36·66 per cent. in 1921.

The proportion, per cent., of adults in the population has grown very considerably throughout the period. This development has been largely consequent on the declining birth-rate, and it is probable that the increase of mortality, as the centre of gravity of the ages of the population moves to the later years of life, will seriously retard the rate of natural increase.

#### BIRTHPLACES OF THE POPULATION.

Broadly speaking, nationality is determined in New South Wales by the common law principle of locality of birth, although it is also provided that any child whose father was a British subject, or a child born on a British vessel, shall be deemed a British subject. The localities of birth of the inhabitants of New South Wales (exclusive of aboriginals of full blood), as stated at the Census of 1921, were as follow:—

Birthplace.	1921.	Birthplace.	1921.
British Empire—		Other Countries—	
Australasia—		Europe ... ..	19,980
Australia ... ..	1,772,767	Asia ... ..	8,588
New Zealand ... ..	19,256	Africa ... ..	592
Other ... ..	233	America ... ..	3,715
British Isles ... ..	260,246	At Sea ... ..	1,295
British India ... ..	2,461	Unspecified ... ..	5,893
Union of South Africa ... ..	2,164		
Canada ... ..	1,517		
Polynesia ... ..	1,664	Total ... ..	2,100,371

This table emphasises the fact that the population is distinctly Australian by birth, still more distinctly British, and that, among the immigrant element, that from the British Isles is overwhelmingly preponderant.

When consideration is given to the period of residence of persons born outside of the Commonwealth some very interesting facts as to immigration are revealed. Thus, in 1921 there were in New South Wales 38,086 persons who had entered Australia between 1916 and 1921, a large proportion being travellers and others than permanent settlers, and 82,021, who entered in the previous five years, making a total of 120,107 for the ten years against a total increase of non-aboriginals by migration of 135,117, indicating that the net number of migrants received in New South Wales from other States during the period was 15,010, excluding from account migrants who died in the period.

## POPULATION ACCORDING TO RACE.

The only outstanding racial element in the population is the European, which at the census of 1921 was shown to embrace no less than 99·1 per cent. of the total population as against 98·9 per cent. in 1911. The largest decrease has occurred among Chinese, by far the greatest element among non-Europeans. The following table shows the number of Europeans in comparison with the number of non-Europeans of each race at each of the last two censuses, aborigines of full blood being excluded :—

Race.	3rd April, 1911.			4th April, 1921.		
	Males.	Females.	Total.	Males.	Females.	Total.
European ... ..	844,014	785,068	1,629,082	1,058,238	1,024,180	2,082,418
Non-European (full-blood)—						
Afghan ... ..	*50	*2	*52	38	2	40
Chinese ... ..	7,939	284	8,223	6,858	392	7,250
Cingalese ... ..	89	13	102	49	12	61
Hindu ... ..	1,119	63	1,182	1,065	88	1,153
Japanese ... ..	119	7	126	289	19	308
Malay ... ..	28	1	29	17	3	20
Negro ... ..	134	23	157	50	7	57
Polynesian ... ..	301	42	343	271	59	330
Syrian ... ..	654	540	1,194	834	735	1,569
Other ... ..	74	25	99	261	38	299
Total Non-European ...	10,507	1,000	11,507	9,732	1,355	11,087
Half-caste ... ..	3,177	2,968	6,145	3,531	3,335	6,866
Grand Total ... ..	857,698	789,036	1,646,734	1,071,501	1,028,870	2,100,371

\* Including Baluchis.

There has been a general decline in the number of full-blooded non-Europeans except Japanese and Syrians, whose numbers have increased. Chinese, who constitute nearly two-thirds of the non-European element, have decreased by nearly 12 per cent. The total number of half-castes, of whom nearly two-thirds are of Australian aborigines, has increased by 10·5 per cent.

## NATIONALITY OF THE POPULATION.

The nationality of the population of New South Wales is preponderantly British, no less than 99·1 per cent. of the inhabitants being of British allegiance. The following table shows the number of persons of each nationality in New South Wales at the census of 1921, exclusive of aborigines of full blood :—

Nationality.	4th April, 1921.			Nationality.	4th April, 1921.		
	Males.	Females.	Total.		Males.	Females.	Total.
British ... ..	1,056,373	1,025,611	2,081,984	Danish ... ..	362	99	461
Foreign—				Dutch ... ..	303	101	404
Chinese ... ..	5,987	118	6,105	Norwegian ... ..	355	23	378
United States of America ... ..	1,222	461	1,683	Japanese ... ..	274	17	291
Greek ... ..	1,137	142	1,279	Polish ... ..	174	79	253
French ... ..	610	581	1,191	Swiss ... ..	181	70	251
Italian ... ..	866	279	1,145	Finnish ... ..	221	19	240
German ... ..	684	256	940	Other ... ..	874	313	1,187
Russian ... ..	584	194	778	Not stated ... ..	788	482	1,270
Swedish ... ..	506	25	531	Total, Foreign ...	15,128	3,259	18,387
				Grand Total ... ..	1,071,501	1,028,870	2,100,371



The foreign element in the population is, in point of numbers, insignificant, and the more so when the small number of foreign women—particularly Chinese and Japanese—is considered. For it is probable that these elements will either die out or be absorbed into the body of the population unless an influx is permitted from overseas. Similar figures are not available for the previous census, but it is apparent from the returns as to race that the number of non-Europeans is declining.

#### *Aborigines.*

The number of aborigines in New South Wales at the date of settlement is not accurately known, but it is certain that they have never been numerous.

The first careful enumeration was made in 1891, when it was found that only 8,280 aborigines of full blood were in existence. Since that date their numbers have rapidly declined to 4,287 in 1901, 2,012 in 1911, and 1,597 in 1921. On the other hand, the number of half-castes shows a tendency to increase, numbering 3,183 in 1891, 3,147 in 1901, 4,512 in 1911, and 4,470 in 1921.

#### NATURALISATION.

Under certain conditions a person of foreign allegiance may be granted a certificate of naturalisation, which entitles him to all the political and other rights, powers, and privileges, and subjects him to all obligations to which natural-born British subjects are entitled, or subject in the Commonwealth of Australia, except insofar as special distinction is made by law between the prerogatives of natural born and naturalised British subjects.

The issue of these certificates is now exclusively a function of the Commonwealth, and they may be granted only by the Governor-General in Council. Aboriginal natives of Asia, Africa, or the islands of the Pacific (except New Zealand) are not eligible for naturalisation.

Any person seeking naturalisation must—

- (a) Declare his intention of settling in the British Empire.
- (b) Have resided within the Commonwealth continuously for at least one year, and within the British Empire during four of the eight years immediately preceding the date of application.
- (c) Must abjure former allegiance and take an oath of allegiance to the reigning sovereign and his successors.

He must, furthermore, advertise his intention to seek naturalisation, produce certificates of good character, declare certain personal particulars, and satisfy the responsible Minister of the Crown that he can read and write English. Certificates of naturalisation may be refused with or without assigning reasons. Letters or certificates of naturalisation issued in the United Kingdom are accepted in Australia on proof of identity and genuineness.

The privileges of naturalisation have not been widely sought in New South Wales on account of the smallness of the non-British element in the population. Between 1849 and 1921 the total number of persons naturalised was 13,084, of whom 5,392 were of German origin; 1,245 were Swedes; 727 Russians; 799 Danes; 701 Italians; and 601 French. Certificates of naturalisation issued under former *Staté* laws remain in force under the present Federal statute (Nationality Act, 1920). Only six Asiatics have been naturalised in New South Wales since 1904. Of these four were Syrians and two Chinese. Records of the occupations of naturalised persons show that, in the past ten years, 739 were labourers, 416 were seamen, 161 miners, 142 cooks, 121 fruiterers, 119 tailors, 114 carpenters, and 107 engineers.

## VITAL STATISTICS.

### REGISTRATION OF BIRTHS, DEATHS, AND MARRIAGES.

**C**IVIL registration of births, deaths, and marriages was inaugurated in New South Wales in March, 1856, when a general registry was established, and a Registrar-General appointed by the Governor. The laws relating to registration were consolidated by the Registration of Births, Deaths, and Marriages Act, 1899, and the Acts relating to marriage by the Marriage Act, 1899.

All births must be registered by the parent within sixty days. After the expiration of sixty days no birth may be registered unless, within six months, a declaration is furnished by the parent, or by some person present at the birth. Within six months of the arrival in New South Wales of a child under the age of 18 months, born outside the State, the birth may be registered upon declaration by the parent, if the parents intend to reside in New South Wales. Still-births are not registered.

Notice of the death of any person must be supplied to the District Registrar by a relation of the deceased, or by the householder or tenant of the house or place in which the death occurs. Such notice must be accompanied by a proper certificate as to the cause of death.

When a dead body is found information is supplied by the Coroner or by the nearest Justice of the Peace.

Marriages may be celebrated only by District Registrars or by ministers of religion registered for that purpose by the Registrar-General. In the former case, the parties to be married must sign, before the Registrar of the district in which the intended wife ordinarily resides, a declaration that they conscientiously object to be married by a minister of religion, or that there is no minister available for the purpose of performing the marriage. Marriage of minors is permissible only with the written consent of parents or guardians.

New South Wales is divided into 212 registry districts, in each of which a District Registrar has been appointed.

### CONJUGAL CONDITION OF THE POPULATION.

The proportion of married persons living in New South Wales at the census of 1921 was considerably more than one-third of the population, being 37·31 per cent., which represents an increase of nearly 4 per cent. since the previous census. The actual numbers and proportions of the population (exclusive of aboriginals), arranged in groups according to conjugal condition, at the census of 1921 were as follow:—

Conjugal condition.	Number.			Proportion per cent.		
	Males.	Females.	Total.	Males.	Females.	Total.
Never married ...	618,553	572,078	1,218,631	60·34	55·60	58·02
Married ...	391,844	391,886	783,730	36·57	38·09	37·31
Widowed ...	27,851	60,701	88,552	2·59	5·90	4·22
Divorced ...	2,214	2,395	4,609	·21	·23	·22
Not stated ...	3,039	1,810	4,849	·29	·18	*·23
Total ...	1,071,501	1,028,870	2,100,371	100·00	100·00	100·00

The persons never married constitute 58 per cent. of the total population, but of these 678,364 (or 32·30 per cent. of the population) were under

the age of 15 years. The number of males over the age of 15 years who have never been married was 302,574, and of females 237,693. The higher marriage rate of the decade 1911-1921 as compared with the preceding decade, coupled with the increasing proportion of persons of marriageable age, has had the effect of considerably raising the proportion of married persons in the population. The proportion of married to the number of persons over the age of 15 years rose from 49·2 per cent. in 1911 to 55·1 per cent. in 1921. The number of males never married is considerably greater than the number of females never married, while the number of widowers is much less than the number of widows, due to the greater mortality of males and not to any greater tendency of widowers to remarry. The number of divorced persons is, of course, exclusive of those who remarried.

The following table affords a comparison of the proportions of each of the principal groups to the total population at each of the last seven censuses:—

Census.	Males.				Females.			
	Never married.	Married.	Widowed.	Divorced.	Never married.	Married.	Widowed.	Divorced.
1861	69·34	28·23	2·43	*	61·09	35·14	3·77	*
1871	69·96	27·59	2·45	*	62·89	32·82	4·29	*
1881	70·64	26·94	2·42	*	63·52	31·75	4·73	*
1891	69·78	27·41	2·78	·03	62·87	32·11	5·00	·02
1901	68·46	28·69	2·75	·10	62·43	32·00	5·46	·11
1911	65·00	32·18	2·67	·15	59·30	35·03	5·52	·15
1921	60·48	36·68	2·60	·26	55·70	38·16	5·91	·23

\* Divorce proceedings were first permitted under "Matrimonial Causes Act," 1873.

There has been a steady decline since 1881 in the proportions of both sexes never married, and a corresponding increase in the proportions married. This is the result partly of the increasing marriage rate since 1901 due in a large measure to the altered age-constitution of the population consequent on the declining birth-rate. The proportion of widowers has shown no appreciable increase during the period, although the proportion of widows has constantly increased, attaining the high proportion of nearly 6 per cent. of the total female population in 1921. The increase in the proportion of divorced persons of both sexes has been relatively very rapid. The numbers and proportions of widowed and divorced persons shown are exclusive of those who had remarried.

#### MARRIAGES.

The number of marriages celebrated in New South Wales during 1921 was 18,518, corresponding to a rate of 8·79 per 1,000 of the population. This shows a marked decrease on the previous year, when the number of marriages was 20,183, and the rate 9·76.

The following table shows the average annual number of marriages and the rates per 1,000 of the population during each quinquennium since 1880:—

Period.	Average Annual Number of Marriages.	Rate per 1,000 of Population.	Period.	Average Annual Number of Marriages.	Rate per 1,000 of Population.
1880-84	6,738	8·39	1905-09	12,080	7·97
885-89	7,679	7·67	1910-14	15,978	9·17
1890-94	7,954	6·80	1915-19	15,345	7·97
1895-99	8,700	6·74	1920	20,183	9·76
1900-04	10,240	7·37	1921	18,518	8·79

A review of the marriage rates during the last forty years shows that, except for five or six years subsequent to 1880, the rates declined steadily. In 1894 they reached the lowest point, being only 6.25 per 1,000 of population. After that year an improvement, remarkable for its regularity, was experienced, until in 1912 the rate (9.55 per 1,000) was the highest then recorded. In 1915 the rate was slightly higher, probably due, in part, to marriages contracted by soldiers prior to their departure for the war. Owing to the absence of many marriageable men the rates for the next three years showed a decline. Coincident with the return of men from active service the 1919 rate exhibited an upward tendency, which was more strongly marked in 1920. In 1921—a year of economic readjustment—the rate fell to a level below the average for the quinquennium preceding the war, but was still considerably above previous quinquennial averages.

This survey of marriages, considered in conjunction with the industrial history of the State, shows that in the past fifty years, except for the war period, the marriage rate has risen and fallen with the condition of trade, indicating that it is normally a reliable reflex of the comparative prosperity of the State.

The following statement shows the marriage rate per 1,000 of the population in each State, the Commonwealth of Australia, and in New Zealand in 1921, compared with the average of 1920 and the two preceding periods of five years:—

State.	1910-14.	1915-19.	1920.	1921.
Victoria ... ..	8.29	7.62	9.85	8.90
South Australia ... ..	9.38	7.94	10.03	8.81
New South Wales ... ..	9.17	7.96	9.76	8.79
New Zealand ... ..	8.51	7.30	10.32	8.69
Commonwealth ... ..	8.72	7.75	9.62	8.59
Western Australia ... ..	8.22	6.62	8.90	7.97
Tasmania ... ..	7.94	6.90	9.50	7.82
Queensland ... ..	8.54	7.59	8.92	7.80

Of the bachelors who married during 1921 in New South Wales only 5 per cent. were outside the ages 20-44, and of the spinsters slightly more than 1 per cent. were outside the ages 15-39. Adopting these, therefore, as the marriageable ages of the sexes, the following table shows, at the census years 1881 to 1911, the proportion of bachelors and of spinsters married per 1,000 unmarried males and females within the specified groups:—

Year. (Census).	Proportion of Bachelors Married during Year per 1,000 Unmarried Males Aged 20 to 44.	Proportion of Spinsters Married during Year per 1,000 Unmarried Females Aged 15 to 39.
1881	65.21	82.32
1891	57.85	71.28
1901	65.92	62.69
1911	79.11	74.96

Up to 1891 the female rate was the higher, but after that year the male rate exceeded the female, as a result of the increase in the proportion of females in the population.

#### *Mark Signatures in Marriage Registers.*

In 1870 the proportion of signatures made in the marriage register with marks was as high as 188.8 per 1,000 of the whole, but in 1921 the number

of persons who signed in this way was only 84, equal to 2·3 per 1,000 persons married. This significant decrease in illiteracy is emphatic evidence of the efficiency of the State system of public instruction.

*Marriages according to Denominational Rites.*

Of every 100 marriages performed in New South Wales, about 95 are celebrated by ministers of religion licensed under the authority of the Registrar-General. The number of marriages at which clergymen officiated during the year 1921 was 17,616, and of those contracted before District Registrars 902, or a proportion respectively of 95·1 and 4·9 per cent.

As compared with the preceding quinquennial period, the returns relating to marriages solemnised by the Church of England and the Roman Catholic Church showed decreased proportions in the year 1921. The following table gives the number and proportion per cent. of marriages registered by the several denominations during 1921 in comparison with the preceding quinquennium:—

Denomination.	Marriages, 1916-1920.	Proportion per cent.	Marriages, 1921.	Proportion per cent.
Church of England ...	34,621	43·95	7,974	43·06
Roman Catholic ...	15,912	20·20	3,715	20·06
Presbyterian...	10,285	13·05	2,553	13·79
Methodist ...	9,696	12·31	2,312	12·49
Congregational ...	1,833	2·33	425	2·29
Baptist ...	1,216	1·54	266	1·44
Hebrew ...	224	0·28	51	0·27
All Other Sects ...	1,870	2·37	320	1·73
District Registrars ...	3,124	3·97	902	4·87
Total Marriages ...	78,781	100·00	18,518	100·00

*Condition before Marriage.*

During the year 1921 of the males married, 17,122 were bachelors, 1,123 were widowers, and 273 were divorced. Of the females, 17,062 were spinsters, 1,129 were widows, and 327 were divorced. The proportion of males re-married was 7·54 per cent., and of females 7·86 per cent.

The following table shows at quinquennial intervals since 1891 the proportion of first marriages and of re-marriages per 10,000 married:—

Period.	Males.		Females.	
	Bachelors.	Widowers and Divorced Men.	Spinsters.	Widows and Divorced Women.
1891	9,229	771	9,216	784
1896	9,184	816	9,172	828
1901	9,270	730	9,268	732
1906	9,262	738	9,352	648
1911	9,407	593	9,456	544
1916	9,377	623	9,362	638
1921	9,246	754	9,214	786

The number of widows and divorced women who re-married in 1916 and 1921 was greater than in the case of widowers and divorced men, whereas the reverse had usually been the case; the variation is probably due to the loss of life among married men at the war. Of the contracting parties per 1,000 marriages in 1921, 925 males and 921 females had never been married before. Generally speaking, the tendency to re-marry is no greater among males than among females.

*Age at Marriage.*

The following statement shows the average age at marriage both of bridegrooms and of brides for each of the last ten years. The ages are as stated at marriage by the contracting parties, without verification. The difference between the ages at marriage of males and females is now on the average about  $3\frac{1}{2}$  years, the males being the older.

Year.	Average Age of—		Average Age of—		Year.	Average Age of—		Average Age of—	
	All Bridegrooms.	Bachelors.	All Brides.	Spinsters.		All Bridegrooms.	Bachelors.	All Brides.	Spinsters.
	years.	years.	years.	years.		years.	years.	years.	years.
1910	29·0	28·2	25·3	24·6	1916	29·1	28·4	26·1	25·2
1911	28·8	28·0	25·3	24·7	1917	29·7	28·5	26·0	25·0
1912	28·9	28·4	25·3	25·0	1918	30·0	28·7	26·1	25·1
1913	28·8	27·8	25·5	24·7	1919	29·7	28·7	26·2	25·3
1914	28·8	27·9	25·6	25·0	1920	29·5	28·5	26·1	25·2
1915	28·7	28·0	25·5	25·0	1921	29·7	28·5	26·2	25·2

The average age at marriage of both bridegrooms and brides, which is assumed as that at last birthday, has increased by nearly twelve months during the last twenty years. That of both bachelors and spinsters increased by about half that period.

Particulars of the ages of persons married are published in the Statistical Register of New South Wales.

*Marriages of Minors.*

The number of persons under 21 years of age who were married during 1921 was 4,683, or 12·15 per cent. of the total. The following are the figures at decennial intervals since 1881:—

Year.	Minors.		Percentage of—	
	Bridegrooms.	Brides.	Bridegrooms.	Brides.
1881	149	1,660	2·37	26·42
1891	177	2,085	2·09	24·65
1901	351	2,546	3·33	24·15
1911	701	3,499	4·59	22·92
1921	833	3,850	4·50	20·79

Compared with the early years the proportion of minors increased among bridegrooms up to the year 1912, when it gradually decreased for five years, the proportion in 1916 being 3·32 per cent. During the next three years the rates were 4·04, 5·19, and 4·68 respectively. Among brides the proportion of minors has always been much larger than among bridegrooms, but it has decreased continuously, with infrequent fluctuations, in the past forty years.

*BIRTHS.*

The number of births registered during 1921 was 54,634, equal to a rate of 25·92 per 1,000 of the population, which is 1·4 per cent. below the average for the previous five years, and is the lowest rate on record, with the exception of that for 1919. The number registered during 1920, namely, 53,974, was the highest recorded in New South Wales for any year prior to that under review. The birth-rate fell sharply after 1888, and declined continuously till 1903, but after that year there was an improvement, and the rate

in 1912 was the highest since 1895. There was a decline in the birth-rate during the war years, 1915 to 1919 inclusive, coincident with the decline in the marriage rate, and a further decline in 1921, although the marriage rate had improved in 1920.

The following table shows the average annual number of births and the birth-rate per 1,000 of the total population in quinquennial periods since 1880:—

Year.	Average Births.	Birth-rate per 1,000 of Population.	Year.	Average Births.	Birth-rate per 1,000 of Population.
1880-84	30,417	37·89	1905-09	41,788	27·56
1885-89	36,877	36·85	1910-14	50,190	28·72
1890-94	39,550	33·80	1915-19	51,331	26·65
1895-99	37,042	28·68	1920	53,974	26·10
1900-04	37,498	26·99	1921	54,634	25·92

The rates shown above are calculated by the usual crude and unsatisfactory method of relating the births to the total population. A preferable method for purposes of strict analysis is to relate the number of mothers at various ages to the total number of women at corresponding ages, or to relate the number of births to the number of women of child-bearing ages.

Unfortunately these methods can be followed with exactitude only at census dates, since at any other time it is very difficult to make a reliable estimate of the number living at various ages, on account of migration and other influences.

The birth-rate per 1,000 women living at various groups of reproductive ages, from 15 to 45 years, have been calculated for the four census periods between 1891 and 1921, and are shown in the following table:—

Ages of Mothers (years).	1891.	1901.	1911.	1921.	Decrease per cent. in rates, 1891 to 1921.
15-19	35·30	30·87	33·75	32·72	7·3
20-24	170·90	134·65	141·45	146·57	14·2
25-29	247·48	177·95	187·35	168·99	31·3
30-34	238·81	168·42	161·20	140·18	41·3
35-39	196·15	136·60	122·27	101·71	48·1
40-44	96·61	70·79	54·51	43·78	54·7
15-44	161·74	117·46	118·50	109·84	32·1

The birth-rate began to decline in 1888. From the above table it will be seen that the decline since 1891 has been general at all age-groups, although the rate in age group, 20-24, has shown a recovery since 1901.

The birth-rate per 1,000 of the population of each State of the Commonwealth and of New Zealand is given in the following table:—

State.	1910-14.	1915-19.	1920.	1921.
Tasmania ... ..	29·90	27·78	27·28	26·97
Queensland ... ..	28·81	27·86	27·10	26·59
New South Wales ... ..	28·79	26·65	26·10	25·92
Commonwealth ... ..	27·73	25·89	25·45	24·95
South Australia ... ..	27·98	25·51	24·71	24·07
Western Australia ... ..	28·63	25·21	24·73	23·43
New Zealand ... ..	26·15	24·37	25·36	23·34
Victoria ... ..	25·42	23·13	23·95	23·15

*Birth-Rates—Metropolis and Remainder of the State.*

During the year 1921 the births recorded in the metropolitan district of New South Wales numbered 22,418, and in the remainder of the State 32,216, or 24·54 and 26·98 per 1,000 of the population respectively. Prior to the year 1893 the metropolitan birth-rate was the higher, but since then, with the exception of the year 1913, the country has consistently shown a higher rate.

Period.	Number of Births.			Births per 1,000 of Population.		
	Metropolis.	Remainder of State.	New South Wales.	Metropolis.	Remainder of State.	New South Wales.
1880-84	49,058	103,026	152,084	40·16	36·90	37·89
1885-89	65,866	118,517	184,383	41·50	34·69	36·85
1890-94	68,754	128,998	197,752	34·11	33·63	33·80
1895-99	61,224	123,986	185,210	26·73	29·75	28·68
1900-04	63,694	123,795	187,489	25·16	28·05	26·99
1905-09	72,409	136,529	208,938	25·50	28·80	27·56
1910-14	95,529	155,423	250,952	27·66	29·53	28·79
1915-19	100,216	156,439	256,655	25·02	27·81	26·65
1920	22,352	31,622	53,974	25·26	26·73	26·10
1921	22,418	32,216	54,634	24·54	26·98	25·92

*The Sexes of Children.*

Of the 54,634 children born during the year (exclusive of those still-born), 27,985 were males and 26,649 were females, the proportion being 105 males to 100 females. In no year, as far as observation extends, have the female births exceeded in number those of males, although the difference has sometimes been very small.

The excess of males over females born during the past sixty-one years has ranged from 2 per cent. in 1875, 1876, and 1901, to about 8·7 per cent. in 1864, the average being 5 per cent. The proportion of males born during the war years was very little different from that in the pre-war years.

It is noteworthy that in the case of illegitimate births, the births of males have always maintained the ascendancy, save in the quinquennial period 1885-89 and in the year 1915, when the births of females predominated slightly.

The following table shows the number of males born to every 100 females, both in legitimate and illegitimate births, during the last forty-two years:—

Years.	Legitimate Births.	Illegitimate Births.	All Births.	Years.	Legitimate Births.	Illegitimate Births.	All Births.
1880-84	104·9	103·9	104·8	1905-09	105·0	104·9	105·0
1885-89	105·4	98·8	105·1	1910-14	105·2	105·1	105·2
1890-94	105·7	105·4	105·7	1915-19	105·3	104·0	105·2
1895-99	105·0	105·4	105·1	1920	105·4	110·3	105·6
1900-04	104·3	102·8	104·2	1921	104·9	108·0	105·0

The proportion in 1921 of male illegitimate births to females was high, but was exceeded by that in 1919 and 1920.

*Plural Births.*

During the year 1921 there were 589 cases of plural births. The children thus born numbered 1,176 (exclusive of eight still-births) and included 583 cases of twins (577 males and 581 females), and six cases of triplets (10 males and 8 females). Of these 589 cases, 30 were classified as illegitimate.



The number of children born at plural births was 2·15 per cent. of the total births.

The following table shows the number of cases of twins, triplets, and quadruplets born in New South Wales during the last ten years, excluding those still-born, and distinguishing legitimate and illegitimate:—

Cases of—			Legitimate.	Illegitimate.	Total.
Twins	...	...	5,446	258	5,704
Triplets	...	...	45	4	49
Quadruplets	...	...	1	...	1

The total number of confinements recorded during the ten years was 517,151; hence the rates per million confinements were:—11,030 cases of twins, 95 of triplets, and 2 of quadruplets; otherwise stated, there were 11 plural births in every 1,000 confinements.

#### ILLEGITIMACY.

The number of illegitimate births in 1921 was 2,673, equal to 4·89 per cent. of the total births and to 1·27 per 1,000 of population. A statement of the illegitimate births in New South Wales at intervals since 1900 is given below.

Year.	Number of Illegitimate Births.	Ratio per cent. to Total Births.	Rate per 1,000 of Population.	Year.	Number of Illegitimate Births.	Ratio per cent. to Total Births.	Rate per 1,000 of Population.
1900	2,605	7·01	1·92	1917	2,533	4·82	1·33
1905	2,912	7·37	2·00	1918	2,654	5·23	1·36
1910	2,900	6·37	1·79	1919	2,534	5·22	1·27
1915	2,681	5·07	1·42	1920	2,635	4·88	1·27
1916	2,501	4·30	1·32	1921	2,673	4·89	1·27

Over the whole State the proportion of illegitimate to total births rose gradually from 4·35 per cent. in 1880 to 7·37 per cent. in 1905, after which a rapid decline occurred to 4·80 per cent. in 1916. The rise and fall of this proportion has followed in a general way the same course as the illegitimate birth-rate per 1,000 inhabitants, which rose between 1884 and 1894 from 1·57 to 2·09 per 1,000 of population. It remained near that level until 1905, since when a rapid decline has occurred to 1·27 per 1,000 of population in 1921.

The most accurate test of the extent of illegitimacy is obtained by relating the total number of illegitimate births recorded to the number of unmarried women of child-bearing age. This test indicates that illegitimacy, which was increasing up to about 1890, has declined very markedly in the past thirty years, the proportion of illegitimate children born for 1,000 unmarried women, aged 15 to 45, having fallen from 18·41 in 1891 to 16·10 in 1901, and to 14·18 in 1911. In 1921 the number of illegitimate children born was 2,673, compared with 2,949 in 1911, and the corresponding rate probably did not greatly exceed 11 per 1,000 in 1921—a decrease of approximately 40 per cent. since 1891.

#### *The Legitimation Act, 1902.*

In 1902 an Act was passed to legitimise children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Act, any child who comes within the scope of its intentions, born before or after the passing thereof, is deemed to be legitimised from birth by the post-natal union of its parents, and entitled

to the status of offspring born in wedlock. Since the passing of the Act there have been 6,203 registrations. The number in each of the last ten years is shown in the following table:—

Year.	Registrations.	Year.	Registrations.
1912	405	1917	390
1913	298	1918	447
1914	393	1919	398
1915	416	1920	455
1916	420	1921	444

#### NATURAL INCREASE.

The excess of births over deaths, or "natural increase," during 1921 was 34,600, equal to 16·42 per 1,000 of population.

The following table shows the natural increase of population since 1890 in the Metropolis, in the remainder of the State, and in the whole of New South Wales:—

Year.	Natural Increase.					Annual Increase per 1,000 of Population.
	Metropolis.	Remainder of State.	Whole State.			
			Males.	Females.	Total.	
1890-94	38,859	82,787	57,233	64,413	121,646	20·79
1895-99	33,056	74,575	49,885	57,746	107,631	16·67
1900-04	34,470	73,377	49,695	58,152	107,847	15·52
1905-09	42,513	88,132	61,652	68,993	130,645	17·23
1910-14	58,969	101,218	75,648	84,539	160,187	18·38
1915-19	56,584	97,413	71,992	82,005	153,997	15·99
1920	12,923	20,090	15,603	17,410	33,013	15·96
1921	13,725	20,875	16,489	18,111	34,600	16·42

On account of the more favourable death-rates, the rate of natural increase prior to the war period had been improving slightly for about sixteen years. The increase per 1,000 of population for the five years, 1915-19, however, was 13 per cent. lower than that for the previous quinquennium; that for 1921 shows a slight improvement as compared with the years immediately preceding it.

Although male births are more numerous than those of females, the increase of population from the excess of births over deaths is greatly in favour of the latter. The male population certainly exceeds the female, but there is a disproportionately large number of deaths among males. There is also a greater mortality among male than among female children, a cause from which alone the natural excess of male births is almost neutralised. During the ten years which closed with 1921, the number of females added to the population by excess of births over deaths exceeded the males by 19,689, or 13 per cent.

Analyses of the natural and migratory increases in the population of the State since 1861 and of the various divisions of the State since 1891 are shown on pages 226 and 236 of this Year Book.

During the year 1921 the birth-rates of the Australian States were slightly lower than those of 1920, but a more favourable death-rate resulted in the

natural increase being just above that for the previous year. There is, however, no indication of recovery to the pre-war rates of natural increase, as will be seen from the table below. The rates are per 1,000 of population.

State.	1910-14.	1915-19.	1920.	1921.
Queensland ...	18.51	17.06	16.47	17.25
Tasmania ...	19.35	17.83	17.61	16.67
New South Wales ...	18.38	15.99	15.96	16.41
Commonwealth ...	17.03	14.99	14.95	15.04
New Zealand ...	16.80	13.85	15.09	14.61
South Australia ...	17.63	14.84	14.27	14.05
Western Australia ...	18.61	15.47	14.45	12.99
Victoria ...	13.85	11.75	12.82	12.63

## DEATHS.

The deaths during 1921 numbered 20,034, equal to a rate of 9.51 per 1,000 of the population, or 10.3 per cent. below the average for the previous five years. Of the total, 11,496 were males and 8,538 females, the rate for the former being 10.70 and for the latter 8.26 per 1,000 living of each of the sexes. The average annual number of deaths from 1880, with the rate per 1,000 of population, in quinquennial periods, was as follows:—

Period.	Average Annual Number of Deaths.			Death-rate per 1,000 of Population.			Proportion per cent. of Male to Female Rate.
	Males.	Females.	Total.	Males.	Females.	Total.	
1880-84	7,286	5,124	12,410	16.55	14.14	15.46	117
1885-89	8,461	6,043	14,504	15.43	13.36	14.49	115
1890-94	8,877	6,344	15,221	14.06	11.77	13.01	119
1895-99	9,002	6,514	15,516	13.11	10.77	12.01	122
1900-04	9,195	6,733	15,928	12.65	10.17	11.47	124
1905-09	9,076	6,583	15,659	11.52	9.04	10.33	127
1910-14	10,598	7,555	18,153	11.59	9.11	10.41	128
1915-19	11,919	8,613	20,532	12.20	9.07	10.66	137
1920	12,120	8,841	20,961	11.47	8.74	10.14	131
1921	11,496	8,538	20,034	10.70	8.26	9.51	130

The death-rate has fallen continuously for both sexes. As shown above, the rate for the five years 1880-84 was more than 50 per cent. higher than the rates now being experienced. Many causes are responsible for this improvement, such as the enforcement of Health Acts, the advance of science, and the better education of the people. The remarkable effect of the above on the death-rates of the population in the early years of life is dealt with later in connection with deaths of children under 1 year and under 5 years.

A table of the death-rates per 1,000 in each of the Australian States and in New Zealand from 1910 to 1921 provides an instructive comparison:—

State.	1910-14.	1915-19.	1920.	1921.
New Zealand ...	9.35	10.52	10.27	8.73
Queensland ...	10.30	10.80	10.63	9.34
New South Wales ...	10.41	10.66	10.14	9.51
Commonwealth ...	10.70	10.90	10.50	9.91
South Australia ...	10.30	10.67	10.44	10.02
Tasmania ...	10.55	9.95	9.67	10.30
Western Australia ..	10.02	9.74	10.28	10.44
Victoria ...	11.57	11.38	11.13	10.52

The deaths during the five years, 1915-19, included those occasioned by the epidemic of influenza in 1919.

*Death Rates—Age and Sex.*

The age and sex distribution of a population are most important factors to be considered in comparing death-rates. In New South Wales during 1921 the death-rate of persons under 45 was 5·5 per 1,000, as compared with 25·2 for persons at and above that age. It follows that any variation in the proportion of persons under and over that age will have a considerable bearing on the death-rate of the whole population.

Again, the death-rate of females during the same period was 23 per cent. less than that of males. Consequently an increase in the proportion of females will be reflected in a corresponding decrease in the general rate.

In the following table death-rates are given for each sex in the principal age-groups during the four decennial periods from 1881 to 1920 and for the year 1921:—

Age-Group, Years.	Deaths per 10,000 Living—All causes.					Reduction per cent., 1881-90 to 1921.
	1881-90.	1891-1900.	1901-10.	1911-20.	1921.	
Males.						
0-4 ... ..	44·57	37·65	27·90	23·28	21·55	52
5-9 ... ..	3·62	2·88	2·07	1·95	1·93	47
10-14 ... ..	2·44	2·08	1·78	1·52	1·66	32
15-19 ... ..	3·74	3·13	2·85	2·58	2·02	46
20-24 ... ..	5·83	4·38	3·67	3·83	2·88	51
25-34 ... ..	7·72	5·88	4·51	5·16	3·89	50
35-44 ... ..	10·92	9·13	7·46	7·07	6·38	42
45-54 ... ..	17·65	14·69	12·87	12·65	10·55	40
55-64 ... ..	30·46	29·05	24·95	23·91	23·32	23
65-74 ... ..	63·67	56·58	58·77	52·39	50·39	21
75 and over ...	149·36	148·98	142·43	147·36	138·33	7
Total ... ..	15·62	13·43	11·77	11·81	10·70	31
Females.						
0-4 ... ..	40·47	32·98	24·21	19·61	17·24	57
5-9 ... ..	3·29	2·77	1·88	1·79	1·70	48
10-14 ... ..	2·18	1·77	1·58	1·25	1·31	40
15-19 ... ..	3·52	2·80	2·53	1·94	1·79	49
20-24 ... ..	5·40	4·12	3·59	3·20	2·25	58
25-34 ... ..	7·44	5·70	4·71	4·52	3·80	49
35-44 ... ..	9·95	8·04	6·82	5·61	5·22	48
45-54 ... ..	13·83	10·86	9·50	8·65	7·67	45
55-64 ... ..	23·12	21·16	18·24	16·43	15·68	32
65-74 ... ..	52·73	43·48	45·91	40·67	39·71	25
75 and over ...	135·66	134·14	123·05	127·15	117·35	13
Total ... ..	13·47	11·02	9·47	8·96	8·26	39
Total.						
0-4 ... ..	42·56	35·35	26·08	21·49	19·42	54
5-9 ... ..	3·46	2·83	1·98	1·87	1·82	47
10-14 ... ..	2·32	1·93	1·68	1·39	1·49	36
15-19 ... ..	3·63	2·97	2·69	2·25	1·91	47
20-24 ... ..	5·63	4·25	3·63	3·50	2·55	55
25-34 ... ..	7·60	5·83	4·60	4·84	3·85	49
35-44 ... ..	10·53	8·67	7·17	6·37	5·81	45
45-54 ... ..	16·19	13·11	11·42	10·83	9·18	43
55-64 ... ..	27·62	25·83	22·04	20·62	19·83	28
65-74 ... ..	59·39	51·22	53·22	47·07	45·43	24
75 and over ...	144·15	142·68	133·72	137·81	127·94	11
Total .....	14·65	12·31	10·67	10·42	9·51	35

The reduction in death-rates during the period shown above was 26 per cent. greater for females than for males. As regards age, the improvement was fairly constant under 55. Above that age improved conditions naturally had less effect. The ages at which death-rates are most favourable are between 10 and 14 years.

A further comparison is given showing the progress periodically by stating the rates for each decennium and for the year 1921 as proportional to the 1881-90 rates.

Age Groups.	1881-90.	1891-1900.	1901-10.	1911-20.	1921.
0-4 ...	100	83	61	50	46
5-9 ...	100	82	57	54	53
10-14 ...	100	83	72	60	61
15-19 ...	100	82	74	62	53
20-24 ...	100	75	61	62	45
25-34 ...	100	77	61	64	51
35-44 ...	100	82	68	60	55
45-54 ...	100	81	71	67	57
55-64 ...	100	94	80	75	72
65-74 ...	100	86	90	79	76
75 and over ...	100	99	93	96	89
Total ...	100	84	73	71	65

The greatest improvement has been at the earlier ages of life, the average death-rate among young children (under 5 years) having fallen to one-half of its original magnitude. The death-rates at nearly all age groups in 1921 were considerably below the average for the preceding ten years.

#### *Deaths—Metropolis and Remainder of the State.*

It is not possible to show the exact difference between urban and rural mortality in New South Wales, but an approximate idea may be obtained from a comparison of the experience of the metropolis with that of the remainder of the State, which is, of course, not absolutely rural, as a few large towns are contained therein. During the year 1921 the number of deaths recorded in the metropolis was 8,693, and in the remainder of the State 11,341, equivalent respectively to rates of 9.52 and 9.50 per 1,000 of the living. The average annual number of deaths and the rate per 1,000 in each of these divisions since 1880, in five-year periods, are given in the following table:—

Period.	Metropolis.		Remainder of the State.		New South Wales.	
	Average Number of Deaths.	Ratio per 1,000 Living.	Average Number of Deaths.	Ratio per 1,000 Living.	Average Number of Deaths.	Ratio per 1,000 Living.
1880-84	5,033	20.60	7,377	13.21	12,410	15.46
1885-89	6,181	19.47	8,323	12.18	14,504	14.49
1890-94	5,979	14.83	9,242	12.05	15,221	13.01
1895-99	5,634	12.30	9,882	11.86	15,516	12.01
1900-04	5,845	11.54	10,083	11.42	15,928	11.47
1905-09	5,979	10.53	9,680	10.21	15,659	10.33
1910-14	7,312	10.59	10,841	10.30	18,152	10.41
1915-19	8,727	10.89	11,805	10.49	20,532	10.66
1920	9,429	10.66	11,532	9.75	20,961	10.14
1921	8,693	9.52	11,341	9.50	20,034	9.51

The death-rate has improved steadily both in the metropolis and in the remainder of the State, but notably so in the former, where it is now very little higher than in the latter, whereas thirty years ago it was 50 per cent. greater. The improvement dates from the quinquennium beginning with the year 1890, and is coincident with the installation of the modern system of sewerage and the enforcement of the provisions of the Dairies Supervision Act of 1886. The marked decline in the rates for each division and for the State as a whole is evident from the fact that the metropolitan rate for the period 1885-9 was 19·5 per 1,000, and for the year 1921 it was 9·5, or a difference of over 50 per cent.; for the same periods the rates for the remainder of the State were respectively 12·2 and 9·5, or a difference of 20 per cent.; and for the whole State, 14·5 and 9·5, or a difference of one-third.

#### THE MORTALITY OF INFANTS.

A further and more sensitive comparison of the rates of mortality in the metropolis and in the remainder of the State may be obtained by considering the death-rates of infants.

##### *Deaths of Children under 1 Year.*

During the year 1921 the children who died before completing the first year of life numbered 3,436, equivalent to a rate of 62·9 per 1,000 births. This rate is 10 per cent. less than that experienced in 1920 and 13 per cent. less than that of 1919. The 1919 rate was affected by the epidemic of influenza, and in 1920 there was an excess of deaths from whooping-cough and diarrhœa and enteritis.

To the total in 1921 the metropolis contributed 1,414 deaths, or 63·1 per 1,000 births, and the remainder of the State 2,022, or 62·8 per 1,000 births.

The following table shows the average annual number of deaths of children under 1 year of age in the metropolis and in the remainder of the State, and the proportion per 1,000 births, in quinquennial periods since the year 1880:—

Period.	Metropolis.		Remainder of State.		New South Wales.	
	Deaths under 1.	Rate per 1,000 Births.	Deaths under 1.	Rate per 1,000 Births.	Deaths under 1.	Rate per 1,000 Births.
1880-84	1,707	174·0	1,956	94·9	3,663	120·4
1885-89	2,163	164·6	2,256	95·2	4,424	120·0
1890-94	1,903	138·8	2,471	95·8	4,379	110·7
1895-99	1,646	134·4	2,572	103·7	4,218	113·9
1900-04	1,416	111·2	2,399	96·9	3,815	101·7
1905-09	1,255	86·7	2,035	74·5	3,290	78·7
1910-14	1,437	75·2	2,211	71·1	3,648	72·7
1915-19	1,373	68·5	1,959	62·6	3,332	64·9
1920	1,658	74·2	2,112	65·8	3,770	69·8
1921	1,414	63·1	2,022	62·8	3,436	62·9

The remarkable improvement in the infantile mortality rate in the metropolis is due in a large degree to the measures adopted to combat preventable disease by more rigid health laws and by education. The Infectious Disease Supervision Act became law in 1881, and in 1896 the Public Health Act was passed, while in 1902 all Acts relating to Public Health were consolidated in the Public Health Act. A scheme for the preservation of infant health was formulated by the Sydney Municipal Council in 1903, and instructional pamphlets were circulated for the guidance of mothers in the care and feeding of young children. In the following year trained women inspectors were appointed to visit mothers in the populous parts of the city and in the surrounding suburbs.

During the year 1904 infantile mortality showed a marked improvement on the rates experienced for about thirty years. A reference to the principal

causes of death during the years immediately prior to and after the year in question will show that in all causes in which care and knowledge could have effect a decrease was experienced. Thus the mortality from diarrhoea and enteritis dropped from 36.90 per 1,000 births in 1903 to 21.31 in 1904; tubercular diseases from 3.06 to 1.58; and congenital debility from 15.54 to 12.98.

Further efforts to reduce the rate of infantile mortality have been made through the establishment in Sydney and other large centres of baby clinics, and through the formation of such public bodies as the Royal Society for the Welfare of Mothers and Babies. Particulars of these institutions will be found in Part "Social Condition" of this Year Book.

The decline in infantile mortality has persisted, especially in diarrhoeal diseases, as will be seen from the following table, which gives the mortality rate per 1,000 brths in each year since 1900 from diarrhoeal diseases, and from all causes less those diseases:—

Year.	Deaths under 1 year of age per 1,000 Births.			Year.	Deaths under 1 year of age per 1,000 Births.		
	Diarrhoeal Diseases.	All other Diseases.	All causes.		Diarrhoeal Diseases.	All other Diseases.	All causes.
1900	29.37	73.90	103.27	1911	16.82	52.67	69.49
1901	27.46	76.28	103.74	1912	22.37	48.93	71.30
1902	33.09	76.65	109.74	1913	23.27	55.07	78.34
1903	36.90	73.45	110.35	1914	19.88	49.84	69.72
1904	21.31	61.11	82.42	1915	17.28	50.85	68.13
1905	18.76	61.79	80.55	1916	15.02	52.82	67.84
1906	21.39	53.14	74.53	1917	10.79	46.69	57.48
1907	21.23	67.41	88.64	1918	9.25	49.92	59.17
1908	21.89	53.90	75.79	1919	17.45	54.82	72.27
1909	21.86	52.42	74.28	1920	17.42	52.43	69.85
1910	20.54	54.07	74.61	1921	14.02	45.87	62.89

In 1921 diarrhoeal diseases caused 22.3 per cent. of the deaths of infants under 1 year of age, whereas in 1903 the proportion was 33.4 per cent.

It is worthy of note that the experience of all the other States of the Commonwealth was similar to that of New South Wales, inasmuch as the reduction in infantile mortality rates which occurred in 1904 has been maintained through a large falling-off in the number of deaths from diarrhoeal diseases.

The death-rate is higher for male infants than for females, the rates in 1921 being 69.4 and 56.1 per 1,000 births respectively. The rates for each sex are shown in the following table in quinquennial periods since 1880:—

Period.	Males.		Females.	
	Deaths under 1.	Rate per 1,000 Births.	Deaths under 1.	Rate per 1,000 Births.
1880-84	1,992	127.9	1,671	112.5
1885-89	2,405	127.2	2,019	112.3
1890-94	2,413	118.7	1,966	102.3
1895-99	2,304	121.4	1,914	105.9
1900-04	2,077	108.5	1,738	94.6
1905-09	1,832	85.6	1,458	71.5
1910-14	2,037	79.2	1,611	65.8
1915-19	1,892	71.9	1,440	57.6
1920	2,153	77.7	1,617	61.6
1921	1,942	69.4	1,494	56.1

The death-rate of female infants has improved more than the male rate, having declined from 112.5 per 1,000 births in 1880-84 to 56.1 in 1921, or by 50.1 per cent., while the male rate has decreased from 127.9 per 1,000 births to 69.4, or by 45.7 per cent.

During the period reviewed, the excess of the male infantile death rates fluctuated from 16·4 per 1,000 births in the quinquennium 1890-94 to 13·3 in 1921. The previous minimum excess was 13·4 in the quinquennium 1910-14.

Reference to the table on page 267 shows that the death-rate for male infants is higher than for female infants in regard to the causes to which the majority of infantile deaths are attributed, *i.e.*, premature birth, infantile debility, diarrhoea and enteritis.

Of the total number of deaths of infants under 1 year of age about one-third occur within a week of birth; at the end of the first month the proportion is over two-fifths; and at the end of three months, three-fifths. Approximately, one child in every 42 born dies within a week of birth. The following statement shows for 1921, in comparison with the average of the preceding quinquennium, the deaths per 1,000 births during each of the first four weeks after birth, and then for each successive month. The experience in the metropolis is distinguished from that in the remainder of the State; the sexes are taken together, and for the year 1921 the illegitimate children are distinguished from the legitimate for the State as a whole.

Age at Death.	Metropolis.		Remainder of State.		New South Wales.			
					1916-20.	1921.		
	1916-20.	1921.	1916-20.	1921.		Legitimate.	Illegitimate.	Total.
Under 1 week ...	23·7	23·2	24·6	23·6	24·3	23·1	30·7	23·4
1 week ...	3·9	2·8	3·9	3·6	3·9	3·1	5·2	3·2
2 weeks ...	2·3	2·1	2·5	2·7	2·4	2·4	4·1	2·5
3 " ...	1·9	1·7	1·9	1·6	1·9	1·6	3·0	1·7
Total under 1 month	31·8	29·8	32·9	31·5	32·5	30·2	43·0	30·8
1 month ...	6·0	5·0	5·2	6·1	5·5	5·3	11·2	5·6
2 months ...	4·7	4·8	3·4	4·5	3·9	4·1	13·5	4·6
3 " ...	4·6	4·6	2·8	3·6	3·5	3·6	11·2	4·0
4 " ...	4·1	3·6	2·9	2·8	3·4	3·0	6·4	3·1
5 " ...	3·1	2·9	2·6	2·2	2·8	2·2	9·0	2·5
6 " ...	3·2	2·7	2·5	2·4	2·8	2·4	4·1	2·5
7 " ...	2·3	2·3	2·2	2·1	2·2	2·0	5·3	2·2
8 " ...	2·4	1·8	2·2	2·0	2·3	1·9	3·0	2·0
9 " ...	2·2	2·0	2·1	2·0	2·1	2·0	2·2	2·0
10 " ...	2·2	1·5	2·0	1·7	2·1	1·6	1·9	1·6
11 " ...	2·3	2·1	2·1	1·9	2·2	2·0	2·2	2·0
Total under 1 year ...	68·9	63·1	62·9	62·8	65·3	60·3	113·0	62·9

In the first week of life the mortality is approximately six times as great as in the second, and generally more than ten times as great as in the third. During the second month the mortality falls rapidly, and thereafter gradually. The rate of infantile mortality is higher in the metropolis than in the remainder of the State. In 1921 the rate per 1,000 births was 63·1 in the metropolis, and 62·8 in the remainder of the State. During the previous quinquennial period the metropolitan rate was 9·5 per cent. higher than that for the remainder of the State.

The table shows a great waste of life among illegitimate children, the mortality under 1 year being 113·0 per 1,000, as compared with 60·3 among legitimate children. The largest proportional excess is not immediately after birth, but about three months later. Taking the experience of 1921 as a guide, the mortality of illegitimates exceeds that of legitimates by about 33 per cent. during the first week of life. The first month shows an excess of 40 per cent., the second over 100, and the third to the sixth over 200. After the sixth month the excess drops quickly, until at the end of the first year of life it practically disappears.



A further dissection of the experience in regard to infantile mortality since 1901, according to the age at death, discloses the striking fact that relatively deaths under one week have actually increased, although the infantile mortality rate as a whole has declined considerably. The following table shows at various ages in the first twelve months the number of deaths per 1,000 births. Since 1901 death-rates of children under 1 week have increased by 14 per cent., while the rates of all children under 12 months have decreased by 39 per cent. At ages over 1 week the mortality rate has declined by 39 to 57 per cent.

Year.	Rate of Mortality per 1,000 Births.						
	Under 1 week.	1 week and under 1 month.	1 month and under 3 months.	Total under 3 months.	3 months and under 6.	6 months and under 12.	Total under 1 year.
1901	20.5	12.2	22.1	54.8	22.4	26.5	103.7
1902	21.3	12.3	22.2	55.8	24.8	29.1	109.7
1903	21.2	11.3	19.5	52.0	26.3	32.1	110.4
1904	21.8	9.7	14.9	46.4	15.8	20.2	82.4
1905	24.3	10.9	13.0	48.2	15.9	16.5	80.6
1906	21.8	9.0	11.8	42.6	14.3	17.6	74.5
1907	23.1	11.3	17.8	52.2	15.8	20.6	88.6
1908	21.5	9.5	11.9	42.9	15.9	17.0	75.8
1909	21.3	9.8	11.6	42.7	14.9	16.7	74.3
1910	21.1	9.2	13.4	43.7	14.3	16.6	74.6
1911	22.3	9.9	11.9	44.1	11.7	13.7	69.5
1912	21.5	8.4	10.6	40.5	13.1	17.7	71.3
1913	22.9	9.5	11.8	44.2	14.7	19.4	78.3
1914	23.5	8.8	10.1	42.4	11.6	15.7	69.7
1915	25.1	7.6	9.4	42.1	9.3	16.7	68.1
1916	23.5	8.3	10.3	42.1	10.0	15.7	67.8
1917	22.9	7.4	8.5	38.8	7.6	11.1	57.5
1918	25.1	7.8	8.0	40.9	7.9	10.4	59.2
1919	26.2	9.0	9.6	44.8	11.5	16.0	72.3
1920	23.9	8.4	10.8	43.1	11.5	15.2	69.8
1921	23.4	7.4	10.2	41.0	9.6	12.3	62.9

The following statement furnishes a comparison of the rates of infantile mortality in the Australian States, in New Zealand, and in various other countries. The rates indicate the deaths under one year per 1,000 births.

State.	Year.	Rate.	Country.	Year.	Rate.
New Zealand ...	1921	47.8	Netherlands ...	1919	50
Queensland ...	"	54.2	Norway ...	1917	54
New South Wales ...	"	62.9	Ireland ...	1921	76
South Australia ...	"	65.5	South Africa ...	1919	82
Commonwealth ...	"	65.7	Switzerland ...	"	82
Victoria ...	"	72.6	England and Wales ...	1921	83
Tasmania ...	"	78.0	*United States ...	1919	87
Western Australia ...	"	78.3	Scotland ...	1921	90
			Ontario, Canada ...	1919	96
			Finland ...	"	135
			Italy ...	1917	140
			Quebec ...	1918	142
			Jamaica ...	1919	161
			Japan ...	1918	189
			Spain ...	1919	192

\* Registration Area.

Of the rates shown in the foregoing table, that for New Zealand is the lowest; but the rates for Australasia generally are greatly superior to those prevailing in most other countries for which records are available.

*Deaths of Children under 5 years.*

As among children under 1 year of age, so there has been a great improvement in the death-rate of children under 5 years of age.

The following table shows the mortality in each division, in periods of five years since 1890, of children under 5 years of age:—

Period.	Metropolis.		Remainder of State.		New South Wales.	
	Average Annual Deaths.	Rate per 1,000 Living.	Average Annual Deaths.	Rate per 1,000 Living.	Average Annual Deaths.	Rate per 1,000 Living.
1890-94	2,674	48·5	3,546	32·1	6,220	37·5
1895-99	2,206	40·8	3,487	31·0	5,693	31·2
1900-04	1,846	35·2	3,210	29·6	5,056	31·4
1905-09	1,612	27·6	2,723	23·4	4,335	24·8
1910-14	1,895	25·5	2,986	21·8	4,881	23·1
1915-19	1,905	20·6	2,771	18·6	4,676	19·3
1920	2,341	25·4	2,981	20·7	5,322	22·5
1921	1,886	20·1	2,790	19·3	4,676	19·6

At every period shown in the table the metropolitan rate was the higher, being in some cases over 50, and never below 7 per cent. in excess until 1917, when the excess was only 1·5 per cent. But the improvement in the metropolis has been greater than in the remainder of the State, the rate having decreased since 1890 by 59 per cent. in the former, and in the latter by 40 per cent. Outside the metropolis the rate did not vary to any significant extent until 1904, when there was a marked decline, which has been continuous. The rate of mortality in 1921, compared with that of a quarter of a century ago, represents a saving of 28 lives in every 1,000 children under 5 years of age in the metropolis, and of 13 in the remainder of the State.

The following table shows for 1921, and for the preceding quinquennial period, the death-rates of illegitimate children under 1 year and under 5 years of age, as compared with those of legitimate children of like ages:—

Age.	Legitimate.		Illegitimate.		Total.	
	Deaths.	Rate per 1,000 Living.	Deaths.	Rate per 1,000 Living.	Deaths.	Rate per 1,000 Living.
<b>Under 1 year—</b>						
1916-20	15,140	61·8	1,686	131·1	16,826	65·3
1921	3,134	60·3	362	113·0	3,496	62·9
<b>Under 5 years—</b>						
1916-20	21,509	18·7	2,031	37·0	23,540	19·5
1921	4,314	19·0	362	32·4	4,676	19·3

The foregoing figures show the poor chance of survival afforded to the illegitimate as compared with that of the legitimate infant, since at each of the ages specified the death-rate of the former was twice that of the

latter; and it is a fact of the utmost gravity that of the children illegitimately born, nearly one-seventh die before completing the first year of existence.

*Causes of Infantile Mortality.*

The mortality of infants in New South Wales has been exceptionally low since 1904. An upward movement in 1907, when the rate was higher than in any of the three preceding years, was followed by a decline in the following year, which continued until 1911. In 1912 there was a slight increase as compared with the year before, but the rate was considerably lower than the average for the preceding quinquennium, notwithstanding the fact that it was a period of low mortality. In 1913 the rate was 78·3, and the highest since 1907. From 1914 the rate steadily declined, but in 1919, on account of an epidemic of influenza, an increase was experienced, the rate being 72·3. The rate for 1920 was 69·8 per 1,000, and that for 1921 was 62·9, the lowest rate experienced in any year except 1917 and 1918.

Children are more susceptible to the attacks of disease in the earliest years of life than later, and nearly 900 children out of every 10,000 born in New South Wales die before reaching their fifth year. Since the rates for preventable diseases are highest, there is no doubt that many children succumb through parental ignorance of the proper food or treatment required.

The following statement shows the principal causes of death among children and the rates under 1 per 1,000 births and under 5 per 1,000 living in 1921 and in the five years 1916-20, distinguishing deaths in the metropolis from those in the remainder of the State:—

Cause of Death.	Deaths under 1 per 1,000 Births.						Deaths under 5 per 1,000 Living.					
	Metropolis.		Remainder of State.		New South Wales.		Metropolis.		Remainder of State.		New South Wales.	
	1916-1920.	1921.	1916-1920.	1921.	1916-1920.	1921.	1916-1920.	1921.	1916-1920.	1921.	1916-1920.	1921.
Measles .. ..	0·4	0·1	0·2	0·3	0·3	0·2	0·3	0·1	0·2	0·1	0·2	0·1
Scarlet Fever .. ..	0·1	..	0·1	0·1	0·1	0·0	0·1	0·1	0·1	..	0·1	..
Whooping-cough .. ..	2·4	1·2	2·2	4·1	2·3	2·9	0·9	0·5	0·7	1·4	0·8	1·1
Diphtheria and Croup .. ..	0·7	0·5	0·3	0·5	0·4	0·5	0·7	0·9	0·7	1·0	0·7	1·0
Influenza .. ..	0·5	0·3	0·5	0·5	0·5	0·4	0·4	0·1	0·3	0·2	0·3	0·2
Tuberculosis—Meninges .. ..	0·2	0·4	0·2	0·1	0·2	0·2	0·2	0·3	0·1	0·1	0·2	0·2
„ Abdominal .. ..	0·1	..	0·1	0·1	0·1	0·0	0·1	0·1	0·1	0·1	0·1	0·1
„ Other Organs .. ..	0·1	0·2	0·1	0·1	0·1	0·2	0·1	0·1	0·1	0·1	0·1	0·1
Syphilis .. ..	0·7	0·5	0·2	0·3	0·4	0·4	0·2	0·1	0·1	0·1	0·1	0·1
Meningitis .. ..	0·7	0·7	0·7	0·4	0·7	0·5	0·4	0·3	0·3	0·2	0·4	0·2
Convulsions .. ..	1·2	0·8	2·3	1·4	1·9	1·2	0·4	0·3	0·6	0·4	0·5	0·4
Eronchitis .. ..	1·2	0·9	2·0	1·9	1·6	1·5	0·3	0·2	0·5	0·5	0·4	0·4
Broncho-pneumonia .. ..	4·1	2·9	2·8	3·5	3·4	3·3	1·5	1·2	1·0	1·3	1·2	1·2
Pneumonia .. ..	1·5	1·7	1·5	1·9	1·5	1·8	0·7	0·8	0·6	0·7	0·6	0·8
Diarrhoea and Enteritis .. ..	16·5	17·2	12·3	11·8	14·0	14·0	5·0	5·3	4·0	3·0	4·4	4·4
Congenital Malformations .. ..	4·5	4·0	3·3	3·9	3·7	4·0	1·0	1·0	0·8	0·9	0·9	0·9
Infantile Debility .. ..	7·4	5·8	7·5	6·0	7·4	6·0	1·6	1·4	1·6	1·3	1·6	1·3
Premature Birth .. ..	18·4	16·9	17·1	15·8	17·7	16·2	4·0	4·0	3·6	3·5	3·8	3·7
All Others .. ..	8·2	9·0	9·5	10·1	9·0	9·6	2·9	3·3	3·3	3·5	3·1	3·4
Total .. ..	68·9	63·1	62·9	62·8	62·3	62·9	20·8	20·1	18·7	19·2	19·5	19·6

The high mortality of infants is largely due to the deaths of children who, either from immaturity or inherited debility, are born unfit for the struggle for existence. Of children under 1, the deaths from these causes in 1921 were equal to 26.1 per 1,000 births, or 42 per cent. of the total deaths of children under 1. A table already given shows that the mortality during the first month of life is nearly half the total mortality during the whole of the first year, and 69 per cent. of this half proportion of the total mortality of the year was due in 1921 to deaths from congenital debility or defects.

Among children under 1 year, diarrhœa and enteritis were responsible for 14.0 deaths per 1,000 births, and infectious diseases for 5.0, of which whooping-cough caused 2.9 and measles 0.2. Respiratory diseases are especially fatal to children; bronchitis in 1921 caused 1.5, broncho-pneumonia 3.3, and pneumonia 1.8 deaths per 1,000 births. The death-rate for these respiratory diseases was slightly above the rate for the previous quinquennium. The death-rate from convulsions was 1.1, from tuberculous diseases 0.5, and meningitis (not tuberculous) 0.6 per 1,000 births.

The causes of death among children under 5 years of age are the same as among children under 1, namely, diarrhœa and enteritis, premature birth, infantile debility, broncho-pneumonia, influenza, malformations, pneumonia, convulsions, whooping-cough, diphtheria, bronchitis, meningitis, tuberculosis, syphilis, measles, and scarlet fever.

A comparison has been made of the causes of death of infants in the different divisions of the State. The variation shown in the mortality-rate is from 49.6 in the North Coast to 98.4 in the Western Division. The following table shows the number of deaths of infants under 1 year of age from principal diseases per 1,000 births in the principal divisions of the State, based on the experience of the five years 1917-21.

Cause of Death.	Metropolis.	Balance of Cumberland.	North Coast.	Hunter and Manning.	South Coast.	Northern Table-land.	Central Table-land.	Southern Table-land.	North-Western Slope.	Central-Western Slope.	South-Western Slope.	North-Central Plain.	Central Plain.	Riverina.	Western Division.	Total Country.	Whole State.
Epidemic Diseases ..	4.0	4.2	2.5	3.4	3.0	4.8	5.2	6.9	3.2	4.7	4.3	3.3	2.8	4.1	7.2	4.0	4.0
Tubercular Diseases ..	4.4	4.3	3.3	3.3	3.3	3.3	4.4	2.2	5.6	5.5	3.3	5.5	3.3	5.5	9.9	4.4	4.4
Veneral Diseases ..	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Meningitis ..	4.4	3.3	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Convulsions ..	1.1	1.9	1.6	1.7	2.3	2.0	2.6	1.7	2.7	2.4	1.9	1.3	3.1	1.2	2.2	2.0	1.6
Bronchitis ..	1.0	1.5	7.7	1.9	1.6	3.0	2.5	3.6	1.9	2.4	1.4	2.0	1.9	1.5	1.2	1.8	1.5
Pneumonia and Pleurisy ..	5.5	4.6	3.2	3.9	4.1	4.1	4.2	3.4	4.3	3.9	3.3	3.3	5.0	5.8	3.8	4.0	4.6
Gastritis and Diarrhœa ..	17.3	10.6	6.3	15.3	8.7	8.3	14.1	15.5	10.2	12.5	8.7	9.9	11.3	9.3	35.2	12.3	14.3
Hernia ..	6.0	3.3	5.5	5.5	9.9	5.5	1.1	1.4	6.0	1.1	3.3	9.9	5.5	1.3	6.0	6.0	6.0
Congenital Malformations ..	4.5	3.0	4.3	3.1	2.4	3.7	4.4	2.6	4.5	2.7	3.3	1.8	5.1	2.8	3.5	3.4	5.8
Congenital Debility and Prematurity ..	25.2	23.1	19.0	27.5	23.5	19.7	26.5	25.8	26.1	21.7	21.0	27.6	26.1	16.7	34.7	24.1	24.5
Other Developmental Diseases ..	4.3	3.7	6.2	4.6	5.9	4.1	5.2	7.4	5.3	5.2	4.4	5.6	6.0	6.0	2.8	5.0	4.8
Accident ..	5.5	7.7	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
All other Diseases ..	2.1	2.0	3.2	2.4	3.1	2.6	3.6	3.3	2.5	3.5	3.0	2.9	5.5	3.7	3.1	2.9	2.6
Total ..	67.7	56.9	49.6	56.0	57.3	53.3	70.7	72.9	63.8	61.3	53.2	66.9	66.2	54.5	98.4	62.9	64.3

Medical opinion is that a favourable summer rainfall reduces the liability to infantile diarrhœa, that premature birth and congenital debility are more prevalent in industrial districts than elsewhere, and that rural districts are most favourable to the rearing of children.

These opinions are borne out in a general way by the experience in New South Wales, although the wide range of geographical conditions and the

variableness of the seasons intrude irregular factors affecting infantile mortality. The highest rate is that of the Western Division, where the greater part of the population lives in the mining district of Broken Hill and the remainder is scattered over extensive plains which receive a low rainfall. The most favourable rate is that of the North Coast, where the population is engaged largely in rural pursuits, and the rainfall is copious, especially during the summer. The rates of infantile mortality in this division present a striking contrast with those of the other coastal divisions, where large industrial and mining centres exist, and the rainfall is less favourable in the summer. The rate for the Southern Tableland appears exceptional, being due to abnormal mortality from epidemic diseases, bronchitis, congenital debility, and prematurity.

*Deaths of Illegitimate Children.*

The following table shows the causes of death of illegitimate as compared with those of legitimate children. The figures represent the deaths of children under 1 year per 1,000 births in New South Wales during the year 1921:—

Cause of Death.	Deaths under 1 per 1,000 Births.				
	Legitimate.	Illegitimate.	Males.	Females.	Total.
Measles ... ..	0·19	0·75	0·25	0·19	0·22
Scarlet Fever ... ..	0·02	...	0·04	...	0·02
Whooping-cough ... ..	2·81	4·86	2·79	3·04	2·91
Diphtheria and Croup ... ..	0·48	0·75	0·68	0·30	0·50
Influenza ... ..	0·41	0·37	0·46	0·34	0·40
Tuberculosis—Meninges ... ..	0·19	...	0·25	0·11	0·18
„ Abdominal ... ..	0·02	...	...	0·04	0·02
„ Other Organs ... ..	0·17	0·37	0·18	0·19	0·18
Syphilis ... ..	0·33	1·87	0·46	0·34	0·40
Meningitis ... ..	0·54	...	0·54	0·49	0·51
Convulsions ... ..	1·19	0·37	0·82	1·50	1·15
Bronchitis ... ..	1·50	1·87	1·61	1·42	1·52
Broncho-pneumonia ... ..	3·21	4·49	3·54	3·00	3·28
Pneumonia ... ..	1·75	2·62	1·89	1·69	1·79
Diarrhœa and Enteritis ... ..	12·66	40·41	15·61	12·34	14·02
Congenital Malformations ... ..	3·93	4·86	4·00	3·94	3·97
Infantile Debility ... ..	5·43	16·09	7·29	4·54	5·95
Premature Birth ... ..	16·07	19·46	18·15	14·22	16·24
All Others ... ..	9·41	13·84	10·83	8·37	9·63
Total ... ..	60·31	112·98	69·39	56·06	62·89

A greater mortality is characteristic of illegitimate than of legitimate children. Exclusive of diseases inherited from contaminated parents, continued neglect and lack of care are largely responsible for these higher death-rates of the illegitimate. Infantile debility, including congenital malformations and premature birth, showed 40·41 deaths per 1,000 births, as against the legitimate rate of 25·43; diarrhœa and enteritis, 40·41, as compared with 12·66; respiratory diseases 8·98, as compared with 6·46; syphilis 1·87, as compared with 0·33; an epidemic diseases 6·73, as compared with 3·91.

A comparison of the rates for each sex shows that the male rates were the higher for all the principal causes of death, except whooping-cough.

## CAUSES OF DEATH.

The system of classification adopted in this most important section of vital statistics is that employed by the Registrar-General of England, which is in accordance with the International List of Causes of Death, based on the second decennial revision by the International Commission at Paris in 1909. A third revision was made in 1920, slightly altering the classification. The amended list is being used in connection with the deaths in 1922.

In the following table will be found particulars of the number of deaths due to the principal causes during the year 1921 and the previous quinquennium, due allowance having been made for the increase in population:—

Causes of Death.	Number, 1921.	Average Number, 1916-20.	Increase (+) or Decrease (-) in 1921.	Causes of Death.	Number, 1921.	Average Number, 1916-20.	Increase (+) or Decrease (-) in 1921.
			per cent.				per cent.
Typhoid Fever ...	129	148	- 12·8	Bronchitis ...	505	619	- 18·4
Measles ...	39	81	- 51·9	Pneumonia ...	1,359	1,401	- 3·0
Scarlet Fever ...	8	42	- 81·0	Other Diseases of			
Whooping-cough ...	257	215	+ 19·5	the Respiratory			
Diphtheria ...	306	253	+ 20·9	System ...	246	311	- 20·9
Influenza ...	392	*1,560	- 74·4	Diseases of the			
Plague ...	1	...	...	Stomach ...	161	169	- 4·7
Erysipelas ...	36	20	+ 80·0	Diarrhœa and En-			
Other Epidemic				teritis (under 2			
Diseases ...	45	57	- 21·1	years) ...	988	1,040	- 5·0
Phthisis ...	1,129	1,204	- 6·2	Diarrhœa and En-			
Tubercular				teritis (2 years			
Meningitis ...	64	72	- 11·1	and over) ...	362	381	- 5·0
Other Tubercular				Appendicitis ...	155	159	- 2·5
Diseases ...	85	107	- 20·6	Hernia, Intestinal			
Cancer ...	1,817	1,726	+ 5·3	Obstruction ...	195	196	- 0·5
Diabetes ...	202	235	- 14·0	Cirrhosis of the			
Leucæmia, Anæ-				Liver ...	108	135	- 20·0
mia, Chlorosis...	196	205	- 4·4	Other Diseases of			
Other General Dis-				the Digestive			
eases ...	401	450	- 10·9	System ...	250	262	- 1·1
Meningitis ...	149	128	+ 16·4	Bright's Disease,			
Cerebro-spinal				Acute and Chronic	946	1,012	- 6·5
Meningitis ...	28	82	- 65·9	Other Genito-Urin-			
Infantile Paralysis	12	13	+ 69·2	ary Diseases ...	330	324	+ 1·9
Cerebral Hæmorr-				Puerperal Septicæ-			
hage ...	636	694	- 8·4	mia ...	87	105	- 17·1
Insanity ...	150	182	- 17·6	Other Puerperal			
Convulsions of				Diseases ...	194	214	- 9·3
Infants ...	86	136	- 36·8	Malformations ...	226	230	- 1·7
Other Diseases of				Congenital Debility	325	412	- 21·1
the Nervous Sys-				Prematurity ...	887	977	- 9·2
tem ...	520	527	- 1·3	Other Develop-			
Diseases of the				mental Diseases	297	246	+ 20·7
Heart ...	2,468	2,409	+ 2·4	Senility ...	960	1,359	- 28·3
Diseases of the				Suicide ...	231	228	+ 1·3
Arteries, Ath-				Accident ...	974	1,012	- 3·8
eroma, etc ...	385	316	+ 21·8	All other Causes...	474	477	- 0·6
Other Diseases of							
the Circulatory							
System ...	207	238	- 13·0	Total ...	20,034	22,349	- 10·4

\* Includes deaths during 1919 Epidemic.

The number of deaths in 1921 was 2,315 (or 10·4 per cent.) less than might have been expected from the experience of the previous five years. Whooping-cough, diphtheria, erysipelas, meningitis, and infantile paralysis showed marked increases on the average number for the previous quinquennium; on the other hand, deaths from scarlet fever, influenza, cerebro-spinal meningitis, measles, and congenital debility were much below the average. Generally speaking, deaths from influenza, cancer, heart disease, and Bright's disease are increasing, whilst those from typhoid, scarlet fever, diphtheria, tuberculosis, bronchitis, and diarrhoea and enteritis are decreasing.

Statistics of the occurrence of communicable diseases among school children since 1913 show that epidemics of such diseases as measles, whooping-cough, scarlet fever, and diphtheria are of periodical recurrence, and, from time to time, assume very grave proportions. Although approximately 80 per cent. of the deaths from these diseases are among children under school age, it is observed that the rate of mortality from these diseases rises and falls with the recurrence of epidemics among school children. Statistics of the occurrence of infectious diseases among school children are now collected quarterly, with the object of facilitating steps towards preventive and remedial measures.

#### *Typhoid Fever.*

The number of deaths from typhoid fever during the year 1921 was 129, equivalent to 0·61 per 10,000 living. The number was 12·8 per cent. less than the average for the preceding five years. This is essentially a preventable disease, and does not obtain a foothold where a proper system of sanitation has been installed and ordinary health precautions have been taken; a great improvement has been attained during the past three decades.

The number of deaths from typhoid fever, and the equivalent rates per 10,000 of population since 1884, are stated below.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	1,356	5·12	1,115	5·13	2,471	5·13
1889-93	950	3·11	714	2·74	1,673	2·94
1894-98	1,107	3·27	731	2·46	1,838	2·89
1899-1903	1,051	2·93	733	2·25	1,787	2·61
1904-08	748	1·93	507	1·42	1,255	1·69
1909-13	773	1·75	461	1·15	1,237	1·47
1914-18	569	1·17	330	0·71	899	0·95
1919	76	0·75	53	0·51	129	0·64
1920	81	0·77	51	0·50	132	0·64
1921	76	0·71	53	0·51	129	0·61

The decrease after 1888 was very marked, and may be traced to the operation of the Dairies Supervision Act, which became law in 1889. The rates show a further improvement as from 1903, and have dropped regularly until that for 1921 was less than 12 per cent. of the rate for the period 1884-88. The rate cannot compare with that experienced in England, where during 1920 only 14 persons died per million living.

The following statement shows the rate for the metropolis and for the remainder of the State during the last twenty-eight years. Owing to a

superior system of sewage, and to the greater attention given to sanitary inspection and garbage disposal, the rate of the metropolis has almost invariably been lower than that of the remainder of the State, though it was higher during 1919.

Period.	Metropolis.		Remainder of State.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1894-98	507	2.26	1,331	3.24
1899-1903	426	1.72	1,361	3.12
1904-08	334	1.21	921	1.97
1909-13	363	1.10	874	1.70
1914-18	319	0.81	580	1.04
1919	61	0.72	68	0.59
1920	48	0.54	84	0.71
1921	49	0.54	80	0.67

Deaths from typhoid occur with greater frequency in the summer and autumn. In 1921 there were 54 deaths during the summer months of December, January, and February, and 36 during the autumn months of March, April, and May.

#### *Smallpox.*

During the last ten years there have been only 5 deaths from smallpox in New South Wales, the last being in the year 1915.

Vaccination is not compulsory in this State, and the precaution is rarely adopted unless an epidemic threatens.

During the year 1913 about 425,000 persons voluntarily submitted themselves to vaccination.

#### *Measles.*

During the year 1921 the deaths due to measles amounted to 39, a number equal to a rate of 0.19 per 10,000 living. The rate for males was 0.20 and for females 0.17. The following statement shows the deaths from this cause, and the rate per 10,000 living, for each sex, arranged in quinquennial periods since 1884:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	166	0.63	165	0.76	331	0.69
1889-93	393	1.28	369	1.41	762	1.34
1894-98	338	1.00	324	1.09	662	1.04
1899-1903	160	0.44	219	0.67	379	0.55
1904-08	82	0.21	107	0.30	189	0.25
1909-13	309	0.70	267	0.66	576	0.68
1914-18	301	0.62	221	0.48	522	0.55
1919	4	0.04	4	0.04	8	0.04
1920	95	0.90	94	0.93	189	0.91
1921	21	0.20	18	0.17	39	0.19

The rate in 1921 shows a decrease of 51.9 per cent. as compared with that of the preceding quinquennium. The high rates during the second and third quinquennial periods were due to severe outbreaks in 1893 and 1898.

Measles is a disease chiefly affecting children, and is periodically epidemic. It was epidemic in 1898-9, when 719 deaths were recorded; in 1912, when



there were 371 fatal cases; and in 1915, when there were 324. Of the number first cited, 233 were deaths of children under 5 years of age, and 54 were those of children under 1 year of age. During the year 1921 deaths from measles of children under 1 year of age numbered 12, and 29 of children under 5 years of age.

According to returns obtained by the Department of Education, there were further epidemics of measles among school children in 1918 and 1920, and although these epidemics were more widespread than the outbreak of 1915, the mortality recorded was very much less. It may be assumed that the occurrence of epidemic diseases among school children are coincident with their occurrence among children of all ages.

#### *Scarlet Fever.*

In 1921 the number of deaths from this disease was 8, equivalent to a rate of 0.04 per 10,000 of the population. The number of deaths in the metropolis was 5, and in the remainder of the State 3—showing respectively rates of 0.05 and 0.02 per 10,000. The rate for 1921 of deaths from this cause was 81 per cent. below the rate for the preceding quinquennium. Since 1884 the deaths from scarlet fever and the rates for each sex have been as follow:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	287	1.08	342	1.57	629	1.30
1889-93	185	0.60	236	0.90	421	0.74
1894-98	162	0.48	218	0.73	380	0.60
1899-1903	84	0.23	114	0.35	198	0.29
1904-08	88	0.23	91	0.26	179	0.24
1909-13	41	0.09	57	0.14	98	0.12
1914-18	112	0.23	161	0.35	273	0.29
1919	7	0.07	10	0.10	17	0.08
1920	14	0.13	10	0.10	24	0.12
1921	3	0.03	5	0.05	8	0.04

Like measles, scarlet fever is an epidemic disease which mainly affects children, the rate generally being somewhat higher for females than for males. During 1921 7 of the 8 deaths were of children under 10 years of age and 4 of these were females. Though not nearly so fatal as formerly, its sporadic recrudescence demands constant vigilance on the part of the authorities responsible for the health of the State. The death-rate from this cause of mortality has fluctuated since the years 1893 and 1894, when it was very heavy, the rate per 10,000 inhabitants having ranged from 0.63 in 1898 to 0.04 in 1921, the lowest recorded.

During the past eight years scarlet fever was epidemic among school children only in 1915 and 1916, in which years 205 deaths were recorded in the State from this disease.

#### *Whooping-cough.*

Whooping-cough is another disease which mainly affects children, and to which, like scarlet fever, females are more susceptible than males. During the year 1921 the deaths from this cause numbered 257. The deaths included 126 males and 131 females. Of the total number, 159 were infants under 1 year, and of the remainder all but 7 were under 5 years of age. The rate

was 1.22 per 10,000 living, or 19.5 per cent. above the average of the preceding quinquennium. The deaths and rates for each sex since 1884 are shown below.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	327	1.24	472	2.17	799	1.66
1889-93	495	1.61	666	2.53	1,161	2.04
1894-98	343	1.01	502	1.69	845	1.33
1899-1903	573	1.59	726	2.23	1,299	1.90
1904-08	369	0.95	445	1.25	814	1.10
1909-13	377	0.86	436	1.09	813	0.97
1914-18	335	0.69	382	0.82	717	0.75
1919	60	0.59	73	0.74	133	0.66
1920	167	1.58	202	2.00	369	1.78
1921	126	1.17	131	1.27	257	1.22

Whooping-cough may justly be regarded as a permanent menace and a constantly recurring ailment of infancy and childhood, for the table shows that periods of decline have generally been followed by increases in the death-rate, which is maintained by epidemic outbreaks, one such occurring in 1907, when 594 cases proved fatal, and the death-rate was the highest since 1878. An examination of the table on page 286 showing the seasonal prevalence of diseases indicates that whooping-cough is most fatal during the four months October to January.

Epidemics of whooping-cough among school children are only second in magnitude to those of measles. The records show that, during the past nine years, this disease has affected large numbers of school children every year and that virulent epidemics occurred in 1913, 1920, and 1921. The total numbers of deaths from whooping-cough in these years was 344, 369, and 257 respectively.

#### *Diphtheria and Croup.*

Diphtheria and croup, under which heading membranous laryngitis is included, caused 306 deaths in 1921. The rate was 1.45 per 10,000 living, or 20.9 per cent. above the rate for the preceding quinquennium. Deaths from these diseases in the Metropolitan area numbered 102, and those in the remainder of the State 204, the respective corresponding rates per 10,000 living in each division being 1.12 and 1.71. The following table shows the number of deaths and the rates in quinquennial periods since 1884:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	1,069	4.04	930	4.51	2,049	4.25
1889-93	1,433	4.65	1,399	5.36	2,832	4.98
1894-98	712	2.10	710	2.39	1,422	2.24
1899-1903	310	0.86	299	0.92	609	0.89
1904-08	367	0.95	338	0.95	705	0.95
1909-13	604	1.37	640	1.59	1,244	1.48
1914-18	659	1.36	682	1.47	1,341	1.41
1919	66	0.65	69	0.70	135	0.67
1920	138	1.31	126	1.25	264	1.23
1921	157	1.46	149	1.44	306	1.45

During the past forty years the rate of mortality from these diseases has decreased very considerably. Mortality from diphtheria was heaviest during two lengthy periods, viz., from 1881 to 1898, and from 1909 to 1921, although

the rate was much lower in the latter period than in the former. During the past nine years diphtheria was most prevalent among school children in 1913 and 1921, but considerable numbers of cases were recorded in other years, the numbers fluctuating from year to year in close sympathy with those of whooping-cough.

The experience of the decennial period 1912-1921 shows the disease to be most fatal during the four months of April to July. Ninety-three per cent. of the persons who died from diphtheria during 1921 were under 10, and about 75 per cent. were under 5 years of age.

### *Influenza.*

During 1921 there were 399 deaths due to influenza. Prior to 1891 the average annual number of deaths was 44, but during that year 988 deaths occurred. From 1892 to 1917 the average number of deaths was 198, but in 1918 a mild outbreak resulted in 372 deaths. This was completely overshadowed by the disastrous epidemic of 1919, when 6,387 persons died from the disease, and an examination of the experience of that year will be found in the 1920 issue of this Year Book.

In the following table the deaths at each outbreak are shown together with those in the intervening periods:—

Period.	Deaths.			Annual Rate per 10,000.
	Male.	Female.	Total.	
1875-1890	338	322	710	0.53
1891	549	439	988	8.65
1892-1917	2,799	2,397	5,196	1.27
1918	218	154	372	1.91
1919	3,851	2,536	6,387	31.93
1920	132	127	259	1.25
1921	204	195	399	1.89

The year 1921 was marked by an unusual outbreak of influenza during the months of July, August, and September, from which the mortality was as heavy as that from the outbreak of 1918. This mild epidemic presented unusual characteristics. Prior to 1919 influenza was essentially a disease fatal to young children and aged persons, but in the severe world-wide epidemic of that year the disease was most fatal to persons in the prime of life (25 to 44 years). The outbreak of 1921 blended both these characteristics, for while the rate of mortality was especially heavy among young children and persons of advanced age, the rates of mortality among persons over 25 years of age were much heavier than in the period of 1891-1918.

These facts are clear from the following table, which shows the number of deaths from influenza per 10,000 inhabitants of each sex in age groups since 1891:—

Age Group Years.	Males.					Females.					Total.				
	1891-1900.	1901-1910.	1911-1918.	1919.	1921.	1891-1900.	1901-1910.	1911-1918.	1919.	1921.	1891-1900.	1901-1910.	1911-1918.	1919.	1921.
0-4	3.82	1.56	.96	12.71	1.80	3.50	1.59	.88	12.22	1.18	3.66	1.58	.90	12.47	1.50
5-9	.36	.14	.16	2.44	.34	.42	.25	.68	4.33	.52	.39	.20	.12	3.39	.43
10-14	.21	.19	.03	5.82	.19	.34	.23	.10	3.90	.09	.23	.21	.06	4.63	.44
15-19	.64	.40	.29	13.84	.34	.63	.36	.10	11.31	.69	.65	.38	.20	12.58	.51
20-24	.99	.42	.29	36.81	.12	.36	.37	.22	24.72	.34	.78	.40	.25	30.19	.23
25-31	1.13	.39	.24	77.42	1.05	1.29	.52	.25	43.57	1.39	1.21	.46	.24	59.96	1.22
32-44	1.53	.36	.50	66.61	2.17	2.04	.73	.43	36.30	2.37	1.92	.88	.47	51.93	2.27
45-54	3.37	1.50	.85	52.40	3.16	3.17	1.55	.60	34.32	2.13	3.29	1.52	.74	43.99	2.67
55-64	7.46	3.11	1.65	41.28	4.21	3.05	3.54	1.52	42.10	3.45	7.94	3.29	1.60	41.65	3.86
65-74	18.57	9.25	4.91	43.46	8.01	22.91	9.80	5.43	54.75	9.39	20.36	9.49	5.15	43.64	8.88
75 & over.	53.21	29.67	18.66	63.47	21.97	61.43	29.56	19.43	53.14	23.18	56.86	29.62	19.32	59.91	22.57
All ages.	2.69	1.38	.87	37.94	1.90	2.64	1.30	.76	25.74	1.89	2.65	1.34	.82	31.93	1.89

*Tuberculous Diseases.*

Of the total deaths in New South Wales during 1921 the number ascribed to the several classified forms of tuberculous disease was 1,278, or 6·38 per cent. of the actual bill of mortality for the State, and equal to 6·06 per 10,000 living—a rate 6·2 per cent. below the average for the preceding quinquennium.

*Tuberculosis of the Lungs.*

Tuberculosis of the lungs, or phthisis, was the cause of 1,129 deaths, or 88 per cent. of the number due to tuberculosis during the year 1921, being sixth in the order of the fatal diseases of the State. The mortality rate per 10,000 living was 5·36, the male rate being 6·54, and the female rate 4·12.

The following table shows the deaths from tuberculosis of the lungs and the rates for each sex since 1884:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	3,132	11·83	2,022	9·30	5,154	10·69
1889-93	3,269	10·61	1,925	7·38	5,194	9·13
1894-98	3,191	9·43	1,983	6·68	5,174	8·15
1899-1903	3,322	9·24	2,304	7·08	5,626	8·21
1904-08	2,985	7·72	2,184	6·13	5,169	6·96
1909-13	3,220	7·31	2,286	5·69	5,506	6·54
1914-18	3,373	6·95	2,194	4·72	5,567	5·86
1919	744	7·33	472	4·79	1,216	6·08
1920	700	6·62	418	4·13	1,118	5·41
1921	703	6·54	426	4·12	1,129	5·36

The general rate has decreased by 50 per cent. in the period under review, that for males by 45 per cent., and for females by 56 per cent. The female rate ranges from 62 per cent. of the male rate in the years 1920 and 1921 to 79 per cent. during the periods 1904-08 and 1884-88.

The improvement in the death-rate is due to many factors, such as the regulation of immigration, conditions of employment, &c., and the enforcement of the various Health Acts, but principally to the adoption of improved methods of medical treatment.

The following table shows the deaths and the mortality-rates of phthisis in the Metropolis and the remainder of the State. In the quinquennial period 1894-98 the rate for the former was 47 per cent. higher than that for the latter division: since that period the extra-metropolitan rate fluctuated but little until 1920, when the rate dropped about 13 per cent. The higher rate for the remainder of the State during recent years is due largely to the transfer of phthisis patients from the metropolis to institutions situated in the country.

Period.	Metropolis.		Remainder of State.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1894-98	2,302	10·26	2,872	6·99
1899-1903	2,490	10·03	3,136	7·18
1904-08	2,184	7·89	2,985	6·40
1909-1913	2,171	6·60	3,335	6·49
1914-18	2,006	5·11	3,561	6·38
1919	467	5·52	749	6·49
1920	453	5·12	665	5·62
1921	449	4·92	680	5·69

Pulmonary tuberculosis is a notifiable disease within the City of Sydney, in the area controlled by the Hunter District Water Supply and Sewerage Board, and in the Katoomba Municipality and Blue Mountains Shire.

A comparison of death-rates from phthisis in the Australian States and New Zealand is given below. The rates are stated per 1,000 of the total population, and do not take account either of age or sex, which are material factors.

State.	Death-rate per 1,000 of Total Population.			
	1910-14.	1915-19.	1920.	1921.
Queensland ...	0.52	0.51	0.47	0.44
New Zealand ...	0.57	0.54	0.59	0.52
New South Wales ...	0.65	0.58	0.54	0.54
Commonwealth ...	0.68	0.62	0.58	0.59
Tasmania ...	0.61	0.53	0.48	0.61
Victoria ...	0.78	0.67	0.66	0.67
South Australia ...	0.74	0.75	0.68	0.67
Western Australia ...	0.71	0.77	0.78	0.78

New South Wales is more fortunate than most of the States of the Commonwealth, especially with regard to the more closely-settled States.

The table below shows the death-rates from phthisis according to age and sex in decennial periods since 1891, and those for the year 1921.

Age Group— Years.	Deaths per 10,000 living—Tuberculosis of Lungs											
	Males.				Females.				Persons.			
	1891- 1900.	1901- 1910.	1911- 1920.	1921.	1891- 1900.	1901- 1910.	1911- 1920.	1921.	1891- 1900.	1901- 1910.	1911- 1920.	1921.
0-4 ..	1.06	1.17	.68	.49	.97	.97	.69	.57	1.01	1.07	.66	.54
5-9 ..	.34	.31	.18	.50	.57	.39	.25	.52	.45	.35	.21	.51
10-14 ..	.54	.52	.28	.19	1.08	1.07	.59	.49	.81	.79	.43	.34
15-19 ..	3.57	2.86	2.24	2.02	4.71	5.30	3.25	2.52	4.14	4.07	2.75	2.27
20-24 ..	10.69	7.97	6.67	5.13	9.64	8.94	6.88	5.48	10.17	8.45	6.78	5.32
25-34 ..	15.68	11.35	9.85	10.08	13.75	11.16	8.61	7.48	14.31	11.26	9.23	8.78
35-44 ..	18.28	14.79	12.08	11.75	13.39	11.90	7.70	6.90	16.22	13.48	10.00	9.89
45-54 ..	19.04	16.56	14.34	11.48	10.84	9.76	6.94	5.86	15.07	13.63	10.97	8.82
55-64 ..	21.98	17.44	14.75	14.22	11.17	10.15	6.71	4.38	17.60	14.28	11.21	9.73
65-74 ..	17.09	17.02	13.00	10.87	7.62	9.07	6.85	6.59	12.97	13.52	10.21	8.88
75 and over ..	4.67	7.45	6.19	5.49	2.44	4.64	4.01	2.40	3.73	6.19	5.16	2.96
All ages..	9.63	8.06	7.00	6.54	6.77	6.48	4.81	4.12	8.30	7.31	5.94	5.36

The decrease shown in female rates is slightly greater than in male rates, that for females being 39 per cent. and for males 32 per cent. The rates according to age, however, show a remarkable difference when the sexes are compared. For males the rates increase steadily till the age group 55-64 is reached, after which a rapid decrease is shown.

For females the rates reach their highest point in the age group 25-34, and after falling away for a time again reach a high level just prior to the last age group of 75 and over.

The resultant rates for the whole population, while negligible under the age of 15 years, increase from that age to 25 years, and then remain practically constant until 75 is reached, after which age the rate drops quickly.

*Other Tuberculous Diseases.*

Of the 1278 deaths during 1921 from tuberculosis, only 149 were from tuberculosis of organs other than the lungs. Of the latter 52 or 35 per cent. were of children under 5 years of age. Taking the age group 0-4 years, and all ages, the following table shows the distinct improvement in the death-rates since the decennium 1891-1900:—

Period.	Deaths per 10,000—Tuberculosis other than of Lungs.					
	Ages 0 to 4 Years.			All Ages.		
	Males.	Females.	Total	Males.	Females.	Total.
1891-1900	15.93	13.41	14.69	2.76	2.42	2.69
1901-1910	7.11	5.93	6.55	1.70	1.51	1.61
1911-1920	3.13	2.96	3.06	1.00	.86	.93
1921	2.29	1.96	2.16	.83	.58	.71

*Cancer.*

In 1921 the deaths from cancer numbered 1,817, equal to a rate of 8.62 per 10,000 living, and 5.3 per cent. above the average of the quinquennial period preceding. The total included 939 males and 878 females, the rates being 8.74 and 8.50 per 10,000 living of each sex respectively.

Classified according to the parts of the body affected and arranged in order of fatality, cancer caused the following deaths:—Stomach and liver, 692; peritoneum, intestines, and rectum, 254; female genital organs, 183; breast, 153; mouth, 133; skin, 73; and other organs, 329.

The following table shows the deaths and rates per 10,000 living of each sex since 1884:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	859	3.25	732	3.37	1,591	3.30
1889-93	1,262	4.10	1,038	3.93	2,300	4.04
1894-98	1,719	5.09	1,387	4.68	3,106	4.89
1899-1903	2,295	6.38	1,877	5.77	4,172	6.09
1904-08	2,671	6.91	2,418	6.78	5,089	6.85
1909-13	3,352	7.63	2,860	7.12	6,222	7.39
1914-18	3,886	8.01	3,458	7.44	7,344	7.73
1919	936	9.22	793	8.10	1,734	8.67
1920	922	8.72	897	7.93	1,729	8.36
1921	939	8.74	878	8.50	1,817	8.62

In New South Wales the male rate is usually the higher, which is contrary to the experience of the United Kingdom, where the female rate is usually the higher. In the United Kingdom, also, the combined rate is usually much higher, but is increasing less rapidly than in New South Wales.

The ages of the 1,817 persons who died from cancer during 1921 ranged from 1 year to 95 years, but the disease is essentially one of advanced age, 92 per cent. of the persons who died from cancer in 1921 being 35 years and over.

In the following table are shown the death-rates for each sex in age groups above 25 years, in decennial periods since 1891:—

Age Group. Years.	Deaths per 10,000 Living—Cancer.											
	Males.				Females.				Persons.			
	1891- 1900.	1901- 1910.	1911- 1920.	1921.	1891- 1900.	1901- 1910.	1911- 1920.	1921.	1891- 1900.	1901- 1910.	1911- 1920.	1921.
25-34	·91	·85	1·00	1·11	1·24	1·37	1·47	1·50	1·07	1·12	1·28	1·30
35-44	3·63	3·93	3·52	4·01	6·79	7·16	6·34	6·47	4·96	5·39	4·86	5·20
45-54	12·13	12·53	13·55	13·78	17·93	19·21	17·35	18·42	14·52	15·41	15·28	15·98
55-64	36·36	34·96	35·43	37·52	33·20	36·54	33·50	37·11	31·52	35·05	34·59	37·33
65-74	51·32	72·01	69·19	80·41	43·60	62·06	59·07	65·90	47·18	67·71	64·60	74·13
75 and over...	63·78	86·36	105·94	105·92	62·95	79·93	93·55	103·12	63·43	85·19	100·08	104·53
All Ages ....	4·90	6·90	8·06	8·74	4·77	6·62	7·37	8·50	4·88	6·77	7·72	8·62

During the period covered by the table the increase in the rates for males ranged from 10 per cent. for the age group 35-44 to 66 per cent. at 75 years and over. For females the range was a decrease of 5 per cent. for the age group 35-44 to an increase of 64 per cent. at 75 years and over.

Prior to the 1911-20 decennium the female rates were consistently higher than the male up to and including the age group 55-64 years, after which the position was reversed. After 1910 the female rate was lower than the male in age groups 55-64.

Cancer is probably the most feared of all diseases, inasmuch as no specific remedy is known, and in all countries for which records are kept the death-rate is increasing.

In the following table the rates, based on the whole population, are given for the Australian States and New Zealand. The comparison is uncorrected for age-incidence, and is therefore somewhat crude.

State.	Death-rate per 1,000 of Total Population.			
	1910-14.	1915-19.	1920.	1921.
Queensland ...	0·64	0·73	0·80	0·79
Western Australia ...	0·56	0·72	0·81	0·83
Tasmania ...	0·70	0·78	0·70	0·83
New Zealand ...	0·79	0·85	0·87	0·85
New South Wales ...	0·74	0·80	0·84	0·86
Commonwealth ...	0·74	0·81	0·85	0·87
South Australia ...	0·79	0·87	0·93	0·92
Victoria ...	0·85	0·89	0·86	0·95

### *Diabetes.*

The deaths due to diabetes in 1921 numbered 202, equal to a rate of 0·96 per 10,000 living, which is 14 per cent. below the average for the preceding quinquennium. The rate for males was 0·84 and for females 1·08 per 10,000 living of each sex. Most of the deaths occurred after middle life, 151 being those of persons over 45 years of age.

### *Meningitis.*

The diseases included under the above heading, encephalitis, simple meningitis, and cerebro-spinal meningitis, caused 177 deaths during 1921, the corresponding rate being 0·84 per 10,000 living. Of this number 120 were males and 57 females, equivalent to rates per 10,000 living of each sex

of 1.12 and 0.55 respectively. The deaths in the Metropolis and country were 86 and 91, with corresponding rates, per 10,000 living, of 0.94 and 0.76. The rate for 1921 was 20 per cent. lower than that of the previous five years.

Of those who died during 1921 59, or 33 per cent., were under 5 years of age.

The deaths caused by cerebro-spinal meningitis during 1921 numbered 28.

### *Hæmorrhage of the Brain.*

To cerebral hæmorrhage and apoplexy, during the year 1921, were due 636 deaths, of which 323 were those of males and 313 those of females. The rate was 3.02 per 10,000 living, or 3.01 for males and 3.03 for females. This rate is less than half that experienced in England and Wales.

The following table shows the number of deaths and the rates for both sexes from cerebral hæmorrhage and apoplexy in quinquennial periods since 1884:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	778	2.97	467	2.15	1,245	2.58
1889-93	796	2.58	618	2.37	1,414	2.48
1894-98	943	2.79	710	2.39	1,653	2.60
1899-1903	1,050	2.92	788	2.42	1,838	2.68
1904-08	1,303	3.31	1,039	2.91	2,342	3.15
1909-13	1,627	3.69	1,439	3.58	3,066	3.64
1914-18	1,693	3.49	1,431	3.08	3,124	3.29
1919	338	3.33	324	3.29	662	3.31
1920	389	3.68	308	3.05	697	3.37
1921	323	3.01	313	3.03	636	3.02

### *Convulsions of Children.*

Convulsions of children (under 5 years of age) caused 86 deaths during 1921, or 0.41 per 10,000 living at all ages, which is 36.8 per cent. below the rate for the previous quinquennium.

The following table shows the number of deaths and the rates for both sexes for every fifth year since 1875:—

Year.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1875	297	9.34	205	7.69	502	8.59
1880	388	9.75	297	8.98	685	9.40
1885	428	8.38	392	9.41	820	8.84
1890	328	5.47	274	5.45	602	5.46
1895	280	4.19	243	4.17	523	4.18
1900	203	2.84	168	2.63	371	2.74
1905	119	1.57	92	1.32	211	1.45
1910	103	1.23	71	0.91	174	1.08
1915	91	0.93	67	0.74	158	0.84
1921	36	0.34	50	0.48	86	0.41

Being limited to children under 5 years of age, the rates are better stated proportionately to that age-period. On this basis the death-rate in 1921 was 0.36 per 1,000 living as compared with 0.56 of the previous quinquennium.



Of the total deaths during 1921, 63 occurred during the first year of life, the equivalent rate being 1.15 per 1,000 births. The deaths of females were more numerous than of males, the numbers during the first year of life being 40 and 23 respectively, and for all children under 5 years of age 50 females and 36 males. The rate for the Metropolis was approximately half that for the remainder of the State. The continuous decline in this cause of infantile mortality is evidence of increasing skill in diagnosing the diseases of children.

### *Insanity.*

Classed as a distinct disease of the nervous system, insanity causes death from general paralysis of the insane and from other forms of mental alienation.

The number of deaths from this cause was 150 in the year 1921. The death-rate per 10,000 living was 0.82 for males, and 0.60 for females.

In England and Wales the corresponding figures for 1920 were 0.89 and 0.39.

Practically all the persons in New South Wales coming within this classification are under treatment in the various mental hospitals. On the 30th June, 1921, there were 7,889 persons under official control and receiving treatment—a proportion per 1,000 of the population of 3.75, or slightly under the average for the preceding quinquennium, which was 3.79.

The proportion of deaths of insane persons in New South Wales is comparatively light. The following table has been computed on the basis of the average number of patients resident in mental hospitals:—

Period.	Males.		Females.		Total.	
	Deaths in Mental Hospitals.	Proportion of Average Number Resident.	Deaths in Mental Hospitals.	Proportion of Average Number Resident.	Deaths in Mental Hospitals.	Proportion of Average Number Resident.
		per cent.		per cent.		per cent.
1894-98	782	6.86	366	5.18	1,148	6.21
1899-1903	1,021	7.77	465	5.54	1,486	6.91
1904-1908	1,280	8.24	613	6.00	1,893	7.35
1909-1913	1,540	8.56	741	6.24	2,281	7.64
1914-1918	1,739	8.59	914	6.70	2,653	7.83
1919	513	12.17	285	9.74	798	11.17
*1920	372	8.42	229	6.95	601	7.79
†1920-21	351	8.33	235	7.71	589	8.07

\* Calendar year.

† Year ending 30th June.

### *Diseases of the Heart.*

Diseases of the heart were the cause of 2,468 deaths during 1921, showing a rate of 11.71 per 10,000 living, or 2.4 per cent. above the average for the preceding five years. Of the total deaths, 1,418 were of males and 1,050 of females, the corresponding rates per 10,000 living of each sex being 13.20 and 10.16. In the Metropolis the rate was 5.9 per cent. higher than in the remainder of the State.

The ages of persons who died during 1921 ranged up to 101 years, and 85 per cent. of those who succumbed were 45 years of age and over.

The deaths and the death-rates of each sex since 1884 are shown below:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	2,149	8·12	1,390	6·39	3,539	7·34
1889-93	2,250	7·30	1,357	5·20	3,607	6·34
1894-98	2,434	7·19	1,478	4·98	3,912	6·16
1899-1903	2,917	8·11	1,932	5·94	4,849	7·08
1904-1908	3,791	9·81	2,727	7·65	6,518	8·77
1909-1913	5,054	11·47	3,633	9·04	8,687	10·31
1914-1918	5,950	12·26	4,168	8·97	10,118	10·65
1919	1,263	12·44	1,032	10·48	2,295	11·47
1920	1,326	12·55	966	9·55	2,292	11·09
1921	1,418	13·20	1,050	10·16	2,468	11·71

The classified causes of the total number of deaths include pericarditis, endocarditis, organic diseases of the heart, and angina pectoris. The apparent increase in mortality due to diseases of the heart is probably the result of more specialised biological knowledge, and of the greater attention given to pathological diagnoses. Many deaths formerly recorded as being caused by senile decay would now doubtlessly be assigned to some cardiac trouble.

In the following table are shown the death-rates for each sex in the principal age groups in decennial periods since 1891.

Age Groups. Years.	Deaths per 10,000 living—Diseases of the Heart.											
	Males.				Females.				Persons.			
	1891-1900.	1901-1910.	1911-1920.	1921.	1891-1900.	1901-1910.	1911-1920.	1921.	1891-1900.	1901-1910.	1911-1920.	1921.
0-4 ..	1·14	1·13	·35	·57	·89	·97	·49	·25	1·02	1·05	·42	·42
5-9 ..	·99	1·10	·94	·93	·98	1·16	·95	1·12	·99	1·13	·94	1·02
10-14 ..	1·23	1·49	1·13	1·34	1·31	1·84	1·49	1·08	1·30	1·66	1·30	1·21
15-19 ..	1·40	1·92	1·78	1·12	1·06	1·98	1·75	1·88	1·53	1·95	1·76	1·48
20-24 ..	1·42	1·55	2·18	1·43	1·83	1·94	2·02	1·23	1·62	1·74	2·09	1·33
25-34 ..	2·66	2·15	2·88	2·94	2·53	2·53	2·70	2·99	2·60	2·34	2·79	2·96
35-44 ..	5·81	5·46	5·67	5·16	5·63	6·13	5·00	5·68	5·74	5·77	5·35	5·41
45-54 ..	13·36	13·79	15·01	13·30	11·20	11·80	11·90	10·97	12·47	12·93	13·69	12·20
55-64 ..	36·56	35·37	38·52	42·13	25·29	28·72	28·17	29·44	31·96	32·48	34·09	36·33
65-74 ..	69·40	91·84	99·07	109·60	54·65	78·67	81·78	81·04	62·37	86·15	91·21	97·72
75 and over ..	104·74	178·83	237·73	308·36	89·54	141·23	201·76	253·46	98·30	161·94	220·73	231·13
All ages ..	7·31	9·60	12·03	13·20	5·20	7·51	9·09	10·16	6·33	8·60	10·60	11·71

Although the rates for all ages have nearly doubled during the period reviewed, the increase is practically confined to ages 65 and over, due, as explained in the previous paragraph, to more correct diagnosis in assigning the cause of death.

Under the age of 45 there is very little difference in the rates of males and of females. After 45 the male rate is distinctly higher, the result, no doubt, of the more strenuous life of males than of females.

#### *Bronchitis.*

Bronchitis caused 505 deaths during 1921, equal to a rate of 2·40 per 10,000 living. Of the total, 276 were males and 229 females, the corresponding rates per 10,000 of each sex being 2·57 and 2·22. The rate for the State was 18·4 per cent. lower than that experienced during the previous five years. Deaths in the Metropolis numbered 203, while 302 succumbed in the remainder of the State. The corresponding rates were 2·22 and 2·53 per

10,000 living. Of the total deaths, 184 were caused by acute bronchitis, the remainder being due to the disease in its chronic form. Of those persons who died of acute bronchitis 54 per cent. were under 5 years of age, while 90 per cent. of those who succumbed to chronic bronchitis were 55 years of age and over. Experience shows the disease to be most prevalent during the months of June, July, August, and September.

### *Pneumonia.*

Pneumonia, including broncho-pneumonia, was the cause of 1,359 deaths during 1921, the equivalent rate per 10,000 living being 6.45, which was 3 per cent. below the average for the preceding quinquennium. Of the total 793 were males and 566 females. The male and female rates per 10,000 living were 7.38 and 5.48 respectively. The deaths in the Metropolis numbered 593, and those in the remainder of the State, 766. The rate in the remainder of the State was slightly lower than that in the Metropolis. An analysis of the deaths according to age shows that pneumonia is most destructive in its attacks on young people and adults in the decline of life.

Of the persons who died from pneumonia during 1921, 36 per cent. were under 5 years of age and 35 per cent. 50 years of age and over. The following table gives deaths and rates, according to sex, since the year 1884:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	2,032	7.68	1,301	5.98	3,333	6.91
1889-93	2,158	7.00	1,373	5.26	3,531	6.21
1894-98	2,514	7.43	1,528	5.15	4,042	6.37
1899-1903	3,191	8.87	2,000	6.15	5,191	7.58
1904-1908	2,816	7.28	1,824	5.12	4,640	6.24
1909-1913	2,983	6.77	1,931	4.81	4,914	5.83
1914-1918	3,779	7.79	2,402	5.17	6,181	6.50
1919	778	7.67	628	6.37	1,406	7.03
1920	822	7.78	616	6.09	1,438	6.95
1921	793	7.38	566	5.48	1,359	6.45

The greatest mortality from pneumonia occurs in the cold weather, and in 1921 there were from this cause 709 deaths, or 52 per cent. of the total number in the four months ranging from June to September.

The following table shows the death-rates for each sex in the principal age groups, in decennial periods since 1891:—

Age Group. Years.	Deaths per 10,000 living—Pneumonia.											
	Males.				Females.				Persons.			
	1891-1900.	1901-1910.	1911-1920.	1921.	1891-1900.	1901-1910.	1911-1920.	1921.	1891-1900.	1901-1911.	1911-1920.	1921.
0-4 ..	21.08	21.19	20.80	21.37	17.16	17.70	18.00	18.17	19.15	19.48	19.43	20.06
5-9 ..	1.29	1.31	1.43	1.93	1.20	1.27	1.41	.96	1.25	1.29	1.45	1.45
10-14 ..	.55	.95	.84	.56	.93	1.10	.76	1.27	.74	1.02	.70	1.06
15-19 ..	2.01	2.29	1.69	1.91	1.20	1.49	.88	1.60	1.64	1.90	1.28	1.76
20-24 ..	3.03	3.00	2.90	2.75	1.90	1.54	1.44	1.23	2.50	2.23	2.13	1.96
25-34 ..	3.91	3.67	3.55	3.05	2.60	2.30	2.09	2.83	3.32	3.01	2.82	2.94
35-44 ..	6.69	6.05	5.01	4.92	3.97	3.92	2.72	3.31	6.55	5.00	3.92	3.93
45-54 ..	9.61	9.47	8.76	8.04	5.33	4.78	4.19	3.30	7.85	7.45	6.68	5.80
55-64 ..	16.05	16.15	12.58	12.51	10.78	10.19	8.13	7.36	13.92	13.56	10.62	10.16
65-74 ..	28.21	28.47	23.90	24.90	18.63	22.98	19.19	20.10	23.89	26.10	21.81	22.67
75 and over ..	42.40	46.54	55.56	55.71	35.38	50.32	52.19	47.16	39.42	43.24	53.97	51.47
All ages ..	7.46	7.68	7.49	7.38	5.22	5.50	5.29	5.48	6.42	6.64	6.42	6.45

As in most diseases affecting adults, the death-rates are higher for males than for females. About 25 per cent. of deaths occur between the ages of 5 and 45 years. In the age group 0-4 years a slight increase is shown, but between the ages of 20 and 74 the rates have been slowly but steadily decreasing. The increase shown in the age group 75 and over is due probably to more complete information being now available as to cause of death.

*Diseases of the Digestive System.*

Diseases of the digestive system accounted for the deaths of 1,230 males and 998 females during 1921, the respective rates per 10,000 living being 11.45 and 9.66. The rate corresponding to the total deaths in the State was 10.57 per 10,000 living, and was 5 per cent. below that experienced during the previous five years. Deaths resulting from disease of the digestive system were caused in the main by diarrhœa and enteritis, with hernia and intestinal obstruction, appendicitis, and cirrhosis of the liver next in order of fatality.

*Diarrhœa and Enteritis.*

In 1921 these diseases were the cause of 1,350 deaths, or 6.41 per 10,000 living, the rates for males being 7.25 and for females 5.53. The general rate was 5 per cent. below the average for the preceding quinquennium. The following table gives the deaths and the rates of males and females since 1884:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	3,412	12.89	3,048	14.02	6,460	13.40
1889-93	3,451	11.20	2,851	10.92	6,302	11.07
1894-98	4,042	11.94	3,638	12.26	7,680	12.09
1899-1903	4,422	12.29	3,901	11.99	8,323	12.15
1904-1908	3,714	9.61	3,000	8.41	6,714	9.03
1909-1913	4,257	9.66	3,471	8.64	7,728	9.17
1914-1918	3,622	7.46	2,957	6.36	6,579	6.92
1919	871	8.58	717	7.27	1,588	7.94
1920	919	8.69	795	7.87	1,714	8.29
1921	779	7.25	571	5.53	1,350	6.41

There was a considerable drop in the rate after 1888, due probably to the beneficial operations of the Dairies Supervision Act. During the next fifteen years there was a gradual increase, followed by a marked improvement in 1904, an improvement which was maintained consistently until the years 1919 and 1920, when an upward tendency was manifested.

According to the classification deaths from these diseases are divided into two groups, one including children under 2 years of age, and the other all persons 2 years of age and over. In the first group there were 988, or 73 per cent. of the total, and in the second 362.

Of the total deaths from diarrhœa and enteritis, 635, or 47 per cent., occurred in the three summer months of January, February, and December; and 117, or 9 per cent., in the months of August, September, and October. As a rule, about 50 per cent. of the deaths occur in the summer.

*Appendicitis.*

To this cause 155 deaths were ascribed in 1921, the rate being 0.74 per 10,000 living, which is 2.5 per cent. lower than the average of the preceding quinquennium. Appendicitis is more fatal to males than to females, the rate for the former in 1921 being 0.79, and for the latter 0.68 per 10,000 living.

*Cirrhosis of the Liver.*

In 1921 the deaths from cirrhosis of the liver, which are of interest in connection with alcoholism, numbered 108, the rate being 0.51 per 10,000 living—20 per cent. below the average for the previous quinquennial period. This disease is more prevalent among males than females—the rate for the former in 1921 being 0.67, and for the latter 0.35 per 10,000 living in each sex.

*Bright's Disease.*

During 1921 there were 1,276 deaths due to diseases of the genito-urinary system, of which number 856 were caused by Bright's disease, and 90 by acute nephritis. Taking these two diseases together, the rate was 4.49 per 10,000 living, and for males and females 5.34 and 3.60 respectively, the general rate being 6.5 per cent. below that experienced during the previous quinquennium. The deaths due to these diseases in the metropolis were 491 and in the rest of the State 455, the corresponding rates per 10,000 living being 5.37 and 3.81. Experience shows that the fatality of these diseases increases slightly during the winter months.

The number of deaths and the rates of mortality due to Bright's disease and acute nephritis are shown below.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	626	2.37	386	1.78	1,012	2.10
1889-93	907	2.94	570	2.18	1,477	2.60
1894-98	1,291	3.81	821	2.77	2,112	3.33
1899-1903	1,659	4.61	996	3.06	2,655	3.88
1904-1908	2,056	5.32	1,199	3.36	3,255	4.38
1909-1913	2,649	6.01	1,539	3.83	4,188	4.97
1914-1918	3,080	6.38	1,682	3.62	4,762	5.01
1919	581	5.72	356	3.61	937	4.68
1920	580	5.49	345	3.78	925	4.92
1921	574	5.34	372	3.60	946	4.49

During the whole period covered by the foregoing table the rate both for males and for females has more than doubled. The male rate is about half as high again as the female. Comparatively few persons under 35 years of age die from nephritis, the proportion for 1921 being 12 per cent. of the total.

The following table shows the death-rates for each sex in the principal age groups in decennial periods since 1891:—

Age Group Years.	Deaths per 10,000 living—Bright's Disease.											
	Males.				Females.				Persons.			
	1891-1900.	1901-1910.	1911-1920.	1921.	1891-1900.	1901-1910.	1911-1920.	1921.	1891-1900.	1901-1910.	1911-1920.	1921.
0-4 ..	1.31	1.52	.87	.90	1.44	1.23	.81	.74	1.37	1.38	.84	.83
5-9 ..	.44	.48	.33	.34	.44	.50	.27	.17	.44	.40	.30	.26
10-14 ..	.26	.49	.28	.36	.38	.53	.48	.20	.32	.51	.38	.58
15-19 ..	.76	.72	.67	.11	.61	.77	.00	.46	.68	.74	.63	.28
20-24 ..	1.01	1.04	1.33	.72	1.26	1.07	1.29	.90	1.13	1.05	1.31	.81
25-34 ..	1.80	1.85	1.88	1.33	2.38	1.74	1.73	1.77	2.06	1.80	1.81	1.55
35-44 ..	4.48	4.36	3.54	3.26	4.52	4.12	3.32	3.16	4.50	4.25	5.43	3.21
45-54 ..	8.40	9.92	10.73	8.71	6.65	7.98	6.65	5.54	7.68	9.08	8.87	7.21
55-64 ..	15.39	20.17	22.91	19.62	10.47	12.83	12.92	13.47	13.29	16.98	18.51	16.81
65-74 ..	26.47	40.87	45.24	40.35	15.77	25.06	28.12	24.39	21.71	34.05	37.46	32.93
75 and over..	29.29	59.12	75.56	69.83	16.59	29.65	41.04	47.16	23.90	45.89	59.53	58.60
All ages ..	3.62	5.16	6.12	5.34	2.63	3.33	3.67	3.60	3.16	4.29	4.93	4.49

Although the rates for all ages show a decided increase during the period reviewed, those for males under 45 and for females under 55 have decreased. The male rate at practically every age is higher than the female. For each sex the rate depends entirely upon the age; a slow increase is noted till the age of 45 is reached, after which the increase is rapid.

#### *Deaths in Childbirth.*

During 1921 the number of deaths of women resulting from various diseases and casualties incident to childbirth was 281, equivalent to a rate of 5.1 per 1,000 births, or 1 death in every 194 births. Puerperal septicæmia caused 87 deaths, puerperal hæmorrhage 34, accidents of pregnancy 20, albuminuria and eclampsia 65, phlegmasia alba dolens, embolus, sudden death 11, and other casualties of childbirth 64. The experience of the five years 1917-21 shows that the average number of fatal cases per 1,000 births for married and for single women are 5.4 and 10.4 respectively, plural births being reckoned as single confinements.

Cause of Death.	Deaths.			Proportion per cent. due to each Cause.		
	Married.	Single.	Total.	Married.	Single.	Total.
Accidents of Pregnancy ... ..	148	13	161	11.09	9.70	10.96
Puerperal Hæmorrhage ... ..	195	4	199	14.61	2.98	13.55
Puerperal Septicæmia ... ..	428	33	461	32.06	24.63	31.33
Albuminuria and Eclampsia ... ..	271	32	303	20.30	23.88	20.63
Phlegmasia Alba Dolens, Embolus, Sudden Death.	165	3	108	7.86	2.24	7.35
Other Casualties of Childbirth ... ..	158	49	237	14.08	36.57	16.13
Total ... ..	1,335	134	1,469	100.00	100.00	100.00

More than any other cause of death during childbirth, puerperal septicæmia can be classed as a preventable disease, but over 31 per cent. of the deaths are due to this cause. During the last ten years the rates per 1,000 births were as follows:—

Year.	Puerperal Septicæmia.			Total Deaths in Childbirth.		
	Metropolis.	Remainder of State.	State.	Metropolis.	Remainder of State.	State.
1912	2.2	2.3	2.3	5.6	6.1	5.9
1913	3.3	1.9	2.7	7.4	5.6	6.3
1914	2.5	1.5	1.9	6.0	5.2	5.5
1915	2.2	1.8	2.0	5.0	5.2	5.1
1916	2.9	1.7	2.2	6.7	5.1	5.7
1917	1.6	2.1	1.9	6.4	6.1	6.2
1918	2.6	1.4	1.8	6.5	4.5	5.3
1919	2.4	.9	1.4	6.6	4.7	5.4
1920	2.7	1.5	2.0	7.6	5.1	6.1
1921	1.9	1.4	1.6	5.8	4.7	5.1

These rates are higher than those experienced in England and Wales, where 4.3 deaths per 1,000 births occurred in 1920, of which 1.8 per 1,000 were due to puerperal septicæmia.

From the foregoing it will be seen that the death-rate is almost invariably higher in the metropolis than in the remainder of the State. This is contrary to expectation, as the metropolis has greater hospital facilities.

The maternal mortality of New South Wales may be considered high, and shows no signs of declining. There has been a satisfactory reduction in infantile mortality, and a reduction in the death-rate of mothers would tend to lower still further the infantile rate, and ensure more babies being born alive.

*Deaths from Violence.*

Deaths from this cause in 1921 were 1,321, or 6.6 per cent. of the total deaths. This number includes 231 suicides, 974 accidents, 37 homicides, 8 war casualties, and 71 not classed (open verdicts). The rate, 6.27 per 10,000 living, was 3.2 per cent. lower than the rate for the preceding quinquennium, which was 6.48. In the year 1921 the males thus dying numbered 1,055, or 9.82 per 10,000 living, and the females 266, or 2.57 per 10,000, very little above a quarter of the male rate.

*Deaths from Suicide.*

The number of persons who took their own lives in 1921 was 231, or a rate of 1.10 per 10,000 living, and about 1.3 per cent. above the average for the preceding quinquennium. The number of male suicides was 176, or a rate of 1.64 per 10,000 living, and of female 55, or a rate of 0.53 per 10,000 living—the male rate thus being more than three times that of the female.

The number of deaths from suicide and the rates per 10,000 living since 1884 are shown in the following table:—

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	428	1.62	96	0.44	524	1.09
1889-93	519	1.68	110	0.42	629	1.11
1894-98	679	2.01	169	0.57	848	1.34
1899-1903	651	1.81	142	0.44	793	1.16
1904-1908	719	1.88	160	0.49	879	1.18
1909-1913	857	1.95	238	0.59	1,095	1.30
1914-1918	888	1.83	223	0.48	1,111	1.17
1919	168	1.66	53	0.54	221	1.10
1920	204	1.93	53	0.58	257	1.37
1921	176	1.64	55	0.53	231	1.20

The means usually adopted for self-destruction by men are either shooting, poisoning, cutting, or hanging. Women, as a general rule, avoid weapons, and resort mostly to poison. Of every 100 cases of suicide, 26 were by the agency of poison, 24 by shooting, 16 by cutting, 13 by hanging, and 13 by drowning.

Experience shows that the suicidal tendency is perhaps influenced by the seasons. During the ten years ended 1921 the proportion of male suicides per 1,000 was, during spring 263, summer 270, autumn 231, and winter 236. During the period named, in five of the ten years, January has headed the list for monthly suicides.

Female suicides, classified for the same periods, do not show anything like the wide divergence seen in the figures for males. The proportions per 1,000 suicides of females were during spring 247, summer 254, autumn 253, and winter 248. No particular month showed any preponderance, contrary to the experience of males.

*Deaths from Accident.*

During the year 1921 the number of fatal accidents was 974, viz., 789 of males and 185 of females, or equal to rates of 7.34 and 1.79 per 10,000 living of each sex, and the general rate was 4.62 per 10,000 living. Accidental deaths have always been numerically greater in the extra-metropolitan area. Of those registered during 1921, deaths from accident in the metropolis numbered 323, and in the remainder of the State 651. As a general rule, about two-thirds of the accidents occur in the latter division, which contains about 57 per cent. of the total population.

The number of deaths from accident and the rates per 10,000 since 1884 are shown in the table below.

Period.	Males.		Females.		Total.	
	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.	Deaths.	Rate per 10,000.
1884-88	3,550	13·41	944	4·34	4,494	9·32
1889-93	3,666	11·90	966	3·70	4,632	8·14
1894-98	3,498	10·33	1,005	3·69	4,593	5·23
1899-1903	3,432	9·54	1,103	3·39	4,535	6·62
1904-1908	3,143	8·13	1,055	2·96	4,198	5·65
1909-1913	3,891	8·53	1,114	2·77	5,005	5·94
1914-18	3,814	7·86	1,075	2·31	4,889	5·15
1919	705	6·93	232	2·35	937	4·68
1920	720	6·81	217	2·38	937	4·53
1921	789	7·34	185	1·79	974	4·62

Although the death-rate from accidents is still high compared with that of more settled countries, it has decreased, the decline for males being more rapid than for females. For the years prior to 1894 the rates were really slightly lower than those shown in the table, because certain causes formerly classed as accidents now fall into different categories.

The experience of the past quinquennium shows that out of every 1,000 accidents 210 are due to vehicles and horses, 147 to drowning, 132 to falls, 127 to burns or scalds, 96 to railways and tramways, 35 to mines and quarries, and 32 to weather agencies, *i.e.*, excessive cold or heat, and lightning. Among males the greatest number of deaths are due to vehicles and horses, and among females to burns and scalds.

#### THE SEASONAL PREVALENCE OF DISEASES.

The following tabulation shows the principal diseases and the seasons of the year during which their effects are most fatal to their victims. The figures are based on the experience of the ten years 1912-21, and show the proportion of deaths per 1,000 from the diseases specified for each of the twelve months. In order to make the results of the computation comparable adjustments have been made to correct the inequality of the number of days in each month.

Month.	Typhoid Fever.	Influenza.	Diphtheria and Croup.	Whooping-Cough.	Phthisis.	Pneumonia.	Bronchitis.	Diarrhoea, Enteritis, and Dysentery.	Bright's Disease.
January ...	138	7	79	124	76	53	46	151	75
February ..	153	6	70	69	74	44	40	126	73
March ...	123	18	94	56	75	47	43	107	68
April ...	110	161	125	61	79	61	57	97	77
May ...	85	79	120	41	85	72	82	69	81
June ...	76	225	106	50	87	106	125	41	93
July ...	53	279	99	48	91	128	155	33	99
August ...	35	91	68	60	96	126	135	29	95
September.	36	57	71	83	91	128	118	28	94
October ...	31	43	56	120	86	96	87	44	85
November.	62	18	60	140	82	77	65	116	84
December.	93	16	52	148	78	62	47	159	76
	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

The chief features of the above table are exhibited in the contrast between the figures relating to typhoid fever, diarrhoea, and enteritis on the one hand, and to pneumonia and bronchitis on the other. In the first group the influence of the hot weather is the controlling factor; in the second, the cold. The warmest months in the year are January, February, and December; the coldest, June, July, and August. Phthisis varies little throughout the year, but the rates show that it is more fatal in the colder months. Bright's disease shows likewise a higher mortality during the cold weather. The seasonal influence on influenza was obscured by the epidemic of 1919.



## LAW COURTS.

ONE of the cardinal principles of the constitution of New South Wales is that of the supremacy of the law of the land, inherited from England. By it equal legal status is accorded to all citizens. No person may be punished lawfully except for a breach of law proven in the courts before which all men have equal status, including rights of appeal and the right, in proper cases, to contest the validity of laws and regulations in the law courts.

### *Laws.*

The body of laws in force in New South Wales are derived from three sources, viz. :—English law introduced in 1828 as modified and supplemented by legislation of the State; valid enactments of the Federal Parliament (by virtue of the Commonwealth of Australia Constitution Act); and Acts of the Imperial Parliament expressly or implicitly binding in New South Wales as a part of the British Empire. The last-named, however, relate mainly to external affairs or matters of Imperial concern, the great body of laws operating in New South Wales being enacted by local legislatures—State and Federal.

The proper subjects for Federal legislation are limited in number. In some cases Federal powers of legislation are exclusive, in others concurrent with those of the State; but in all cases of conflict valid Federal laws override State laws. The legislative powers of the Federal Parliament are confined mainly to public law, and to those matters of private law on which interstate uniformity is desirable. The greater part of private law is enacted by the State Parliament.

The legal system of New South Wales is highly developed, having been modelled closely on that of England by incorporating into the body of local law and legal procedure leading features from the English system.

### *Development of the Present Legal System.*

New South Wales was originally founded as a penal settlement, and it did not inherit at once the body of law in force in England, but only such as was expressly applied to it. At the first settlement a criminal court of justice, consisting of a Judge-Advocate and six military assessors, was established under authority of an Imperial statute of 1787 which authorised it to deal with offences against the criminal law of England. The commission of the Judge-Advocate empowered him to deal also with civil cases. In addition, a Vice-Admiral's Court was established, and several officers, including the Governor, were appointed Justices of the Peace, the Governor also having power to commission other Justices. During the first twenty-six years of the colony's existence the courts of law were of a military character.

In 1814 independent courts of civil jurisdiction were established. These were called the "Supreme Court," and the "Governor's Courts," and, although they reformed many abuses of the older system, the administration of justice was not placed on a satisfactory basis until 1824, when, by virtue of the Charter of Justice, a Supreme Court was constituted with a Chief Justice having jurisdiction both civil and criminal; the jury system was introduced; and regular courts of Quarter Sessions were established.

Some uncertainty still existed as to how far English law and tradition applied, but in 1828 a momentous innovation was made by the introduction of the whole existing body of English laws (statutes, decisions of courts, and conventions) applicable to the circumstances of the colony at that date. Thus New South Wales was placed practically on the footing of a settled colony as regards its legal system. The present legal and judicial systems really date from these statutes of 1824 and 1828, and the exact applicability of English law under them has been decided, as occasion arose, by the Supreme Court of the State, the High Court of Australia, and the Judicial Committee of the Privy Council.

Thus there was adopted as the law of New South Wales the English Common Law relating to property, contract, tort, crime, personal freedom, and liberty of speech, in addition to much English statute law including such constitutional enactments and charters, as the Habeas Corpus Acts and the Bill of Rights.

### PRESENT LEGAL SYSTEM

The main features of the present legal system are that established law is enforced by public Law Courts presided over by judges who hold office until they reach a prescribed retiring age, subject only to good behaviour, as determined by Parliament; the advocates employed at law are subject to the special control of the Supreme Court; and officers of police or prisons are answerable at law for the manner in which their duties are performed.

The jurisdictions of the courts of law are distributed in such a way as to secure prompt trial in all matters. Minor cases are relegated to Courts of Petty Sessions usually sitting within the districts in which they arise, as a Small Debts' Court in civil cases, and as a Police Court in criminal cases. These courts are presided over by salaried magistrates or honorary justices. More important civil cases are heard before a judge of the District Court, who also presides in criminal jurisdiction over Courts of Quarter Sessions.

A number of courts of law are established to deal with certain special matters. These are—Licensing Courts, Fair Rents Courts, Taxation Courts of Review, (Mining) Wardens' Courts, Courts of Marine Inquiry, and, among criminal courts of magisterial rank, Coroners' Courts and Children's Courts. A special jurisdiction has been established for Courts of Industrial Arbitration and the Board of Trade, presided over by judges with the status of judges of the District Court. Special matters arising under the various land laws of the State are dealt with by Local Land Boards; appeals from, and important questions of valuation are dealt with by the Land and Valuation Court, of which the judge is equal in status to judges of the Supreme Court.

The Supreme Court of New South Wales has jurisdiction in all matters of law arising in the State, except certain matters of a Federal nature, which are reserved for the High Court of Australia. It may delegate certain of its powers, and exercises general powers of supervision over the administration of justice through its right to issue and enforce writs and to hear appeals.

The external courts of law, whose jurisdiction extends to New South Wales are the Judicial Committee of the Privy Council (appellate only), and the High Court of Australia (original in certain matters and appellate in other matters).

Jurisdiction under Federal laws is generally exercisable by any State court, presided over by a magistrate or judge, subject to the same limitations as are imposed on other jurisdictions under State laws.

## LOWER COURTS OF CIVIL JURISDICTION.

*Courts of Petty Sessions (Small Debts Courts).*

A limited civil jurisdiction is conferred by the Small Debts Recovery Act (1912), on magistrates and justices sitting as Small Debts Courts to determine, in a summary way according to equity and good conscience, actions for the recovery of debt or damages. The jurisdiction of these courts is limited to cases involving not more than £50. A police or stipendiary magistrate may exercise the full jurisdiction of the court, two justices of the peace may hear cases involving amounts up to £30, and one justice up to £5. In cases of indefinite demands jurisdiction extends only to cases involving £10, or, by consent of the parties, up to £30, but the courts may not deal with matters involving titles to freehold or future rights.

In general, appeal may be made from a decision of the court only when it exceeds its jurisdiction or violates natural justice.

The principal officers of the court are a registrar, who acts as clerk to the bench, and may enter judgment in cases admitted and agreed upon, and such bailiffs as are appointed from time to time for the service and execution of orders and judgments.

Particulars of the transactions of the Courts in the past two years are shown below :—

Transactions.	1920.			1921.		
	Up to £30	£30 to £50	Total.	Up to £30	£30 to £50	Total.
Cases brought before the Registrar—						
Judgments given for Plaintiff...	10,346	381	10,727	11,154	731	11,885
Not proceeded with ... ..	10,535	112	10,647	12,835	294	13,129
Verdicts given by Court—						
For Plaintiff ... ..	3,900	110	4,010	4,514	288	4,802
For Defendant ... ..	288	11	299	273	16	289
Withdrawn or struck out ...	8,364	126	8,490	6,860	301	7,161
Nonsuits ... ..	293	9	302	272	19	291
Cases pending... ..	8,761	122	8,883	8,595	335	8,930
Total Cases ... ..	42,487	871	43,358	44,503	1,984	46,487
Amount of Judgments for Plaintiff £	72,652	14,145	86,797	90,027	21,565	111,592
Amount of Verdicts for Plaintiff £	21,080	3,654	24,734	28,249	5,335	33,584

The number of cases listed does not represent individual litigants, but it is interesting to note that the proportion of cases disposed of—17·7 per thousand of population—was the same in 1911 as in 1921.

In garnishee cases the Court may order that all debts due by a garnishee to the defendant may be attached to meet a judgment debt, and by a subsequent order, may direct the garnishee to pay so much of the amount owing as will satisfy the judgment debt. In respect of wages or salary, garnishee orders may be made only for so much as exceeds £2 per week. The garnishee cases in 1921 numbered 1,719.

Oral examinations of judgment debtors as to debts due to them, ordered on the application of a judgment creditor, numbered 589 in 1921. Interpleader cases, as to claims made to goods held under a writ of execution by a person not party to the suit, numbered 20.

*Licensing Courts.*

Under the Liquor Act of 1912, a Licensing Court is established for each of the licensing districts in New South Wales to deal with applications for new licenses, renewal, removal, or transfer of existing licenses, to manufacture or sell intoxicating liquors. Such licenses operate for one year unless some other period is specified.

In the metropolitan district the Court for granting licenses to sell intoxicants consists of three Stipendiary Magistrates, and in country districts of the local Police Magistrate and two specially-appointed Justices of the Peace; where there is no Police Magistrate resident within 10 miles of the Court House a Licensing Magistrate may be appointed.

The particulars of licenses granted and fees collected in 1920 and 1921 are as follow :—

Class of License.	1920.		1921.	
	Number of Licenses.	Amount of Fees.	Number of Licenses.	Amount of Fees.
Publicans ... ..	2,517	£ 89,199	2,488	£ 98,952
Additional Bar ... ..	137	2,721	153	2,891
Club ... ..	77	1,105	78	1,123
Packet ... ..	13	130	13	130
Booth or Stand ... ..	1,959	3,918	2,337	4,674
Colonial Wine, &c. ... ..	443	1,329	450	1,350
Brewers ... ..	17 }	5,540 }	17	360
Spirit Merchants ... ..	217 }		244	5,690
Total ... ..	5,380	103,942	5,780	115,170

Further particulars of the number of hotel licenses issued in relation to the population, and of the Licenses Reduction Board appointed under the Liquor Amendment Act, 1919, will be found in the chapter of this Year Book treating of "Social Condition."

*Fair Rents Courts.*

These courts, established under the Fair Rents Act, 1915-20, may determine, upon application, the fair rent of any dwelling-house let for a term not exceeding three years at a rental not exceeding the rate of £156 per annum. The courts sit in proclaimed districts, there being one court for the Metropolis, presided over by a special magistrate. Since 16th August, 1920 the jurisdiction has been exercised by a Police or Stipendiary Magistrate in country districts, where the total number of cases dealt with to the end of 1922 was 165; of these 67 were withdrawn, in 22 cases the rent was fixed as at date of application, in 41 it was reduced, and in 35 increased.

The first sitting of the Court in the Metropolis was held on 13th March, 1916, the transactions during each year ended 31st March, being as follow :—

Particulars.	1916-17.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.	Total.
Cases withdrawn or struck out ...	141	53	100	225	439	478	1,436
Rent fixed as at date of application...	137	49	36	47	52	75	396
Rent increased...	7	19	132	254	256	237	905
Rent decreased...	294	102	65	141	187	245	1,034
Total ... ..	579	223	333	667	934	1,035	3,771

Some further particulars of the operations of the Court are published in the chapter "Food and Prices" of this Year Book.

*Taxation Courts of Review.*

All Judges of the District Courts have been authorised to sit as Taxation Courts of Review under the Land and Income Tax Act, 1895. The jurisdiction extends to the hearing and determining of appeals lodged against assessments by the Commissioner of Taxation by persons within the local jurisdiction of the Court. Points of law may be referred to the Supreme Court, but otherwise no appeal is allowed.

*(Mining) Wardens' Courts.*

By virtue of the Mining Act, 1906, mining wardens may hold courts to determine such disputes arising within their district as the possession of mining lands, or claims under mining contracts. In general their procedure is summary, and their decisions final, but appeal lies in certain cases to a District Court or, on points of law, to the Supreme Court.

*Courts of Marine Inquiry.*

Cases of shipwreck or casualty to British vessels, or the detention of any ship alleged to be unseaworthy, and charges of misconduct against officers of British vessels arising on or near the coast of New South Wales, or on any ship registered at or proceeding to any port therein, are heard by one or more authorised Judges of the District Court or Police or Stipendiary Magistrates sitting with two or more assessors as a Court of Marine Inquiry.

The findings of this Court are final, except when the responsible Minister directs a rehearing of the case where new evidence is available, or a miscarriage of justice is suspected.

The proceedings of the Court are governed by the Navigation Acts of the State and Commonwealth.

In 1921 inquiries were held into one case of collision, one of shipwreck, and the loss of one vessel. In two cases it was found that no person was to blame, and in one that the master was at fault, but not sufficiently to warrant suspension of his certificate.

## DISTRICT COURTS.

District Courts have been in existence in New South Wales since 1858 as intermediaries between the Small Debts Courts and the Supreme Court. They are presided over by judges with special legal training, who have jurisdiction only over cases arising in districts allotted to them. Sittings are held at places and times appointed by the Governor-in-Council. In 1921 there were seven District Court Judges and sixty-one District Court districts. The courts sit during ten months of the year in the Metropolis, and three or more times per year in important country towns. Each court has attached to it a registrar and other officers.

Ordinarily cases are heard by one judge sitting alone, but a jury may be impanelled in any case under certain conditions. The jurisdiction of the Court extends over issues of fact in equity, probate and divorce proceedings remitted by the Supreme Court, and over actions at Common Law involving an amount not exceeding £400, or £200 where a title to land is involved.

Litigants may be compelled in appropriate cases to apply to the District Court by the power of the Supreme Court to remit proper cases to it, and by the rule of the Supreme Court not to allow costs to parties who recover a sum not exceeding £30 in litigation before it.

The findings of the District Court are intended to be final, and all right of appeal may be excluded by written agreement between litigants, but new trials may be granted at the discretion of the Judge of the District Court.

Otherwise appeal may be made to the Supreme Court in cases involving more than £10 where a point of law or question of the admissibility of evidence is raised.

Particulars of suits brought in District Courts in their original jurisdictions during the last five years are given in the following table :—

Year.	Total Suits.	Causes Tried.		Causes Discontinued or Settled without hearing.	Judgment for Plaintiff by Default, Confession, or Agreement.	Causes referred to Arbitration.	Causes Pending and in Arrear.	Total Amount of Claims.	Court Costs of Suits.
		Verdict for Plaintiff.	Verdict for Defendant (including Non-suit, etc.).						
1917	5,568	429	205	1,539	1,882	2	1,511	£ 274,646	£ 14,570
1918	5,572	388	214	1,605	1,837	5	1,523	259,902	18,253
1919	6,221	465	207	1,835	1,949	14	1,751	333,539	17,207
1920	7,083	537	228	1,989	2,183	3	2,143	377,419	23,140
1921	8,697	595	267	2,152	2,929	2	2,752	475,816	29,227

Of the causes heard during 1921, only 79 were tried by jury. During the same period there were 13 appeals to the District Court from judgments given in lower Courts; there were 15 motions for new trials, of which 6 were granted. The amount of judgment for plaintiffs during the year was £165,637.

The number of issues remitted for trial from the Supreme Court to District Courts in 1921 was 84 in Matrimonial Causes, 3 in Equity, and 2 in Probate. In addition, 1,795 appeals were lodged against rating under Local Government Acts, but of these 1,628 were settled out of Court; 158 applications were heard under the Workmen's Compensation Act, 120 awards being made in favour of applicants, while in 114 cases of death a total of £52,506 was paid into Court.

#### SUPREME COURT.

The Supreme Court of New South Wales was established in 1824 under the Charter of Justice. It is now presided over by a Chief Justice and not more than seven Puisne Judges, of whom four are usually engaged in the Common Law and Criminal jurisdictions, and the remainder in Equity, Bankruptcy, Probate, Lunacy, and Matrimonial Causes.

The Court possesses original jurisdiction over all litigious matters arising in the State (other than special matters concerning land and industrial arbitration), in certain cases where extra-territorial jurisdiction has been conferred, in Admiralty, and in appeal. Its original jurisdiction is usually exercised by one judge. The procedure and practice of the Court are defined by statute, or regulated by rules which may be made by any three or more judges. In proper cases appeals may be carried from findings of the Supreme Court to the High Court or Privy Council.

Particulars are given below of each division of the civil jurisdiction of the Court.

#### *Common Law Jurisdiction.*

The present jurisdiction of the Supreme Court at Common Law dates from 1828. It extends to all cases not falling within any other jurisdiction. Actions are tried usually in the first instance in sittings at nisi prius, before

one judge and a jury of four, or twelve in special cases. A jury may be dispensed with by consent of both parties and under statutes governing certain cases. A judge may sit "in chambers" to deal with questions not requiring to be argued in court.

The following table gives particulars of causes set down and writs issued in the Supreme and Circuit Courts (Common Law Jurisdiction) during the last five years. The number of writs issued includes cases which were settled by the parties without further litigation.

Particulars.	1917.	1918.	1919.	1920.	1921.
Writs Issued ... ..	2,304	2,486	2,987	3,515	4,745
Judgments Signed ... ..	1,018	1,022	1,158	1,369	2,172
Causes Tried—					
Verdict for Plaintiff ... ..	102	114	127	175	191
"    Defendant ... ..	36	28	36	39	50
Jury Disagreed ... ..	...	...	...	2	3
Nonsuits ... ..	10	5	6	9	18
Total ... ..	148	147	169	225	262
Causes—					
Not proceeded with ... ..	77	95	91	151	210
Referred to Arbitration... ..	3	2	1	7	10
Total Causes set down...	228	244	261	383	482
Fees paid into Consolidated Revenue	£	£	£	£	£
Fund ... ..	7,925	8,278	10,514	13,221	19,408
Cost of Litigation—					
Brought in at ... ..	33,256	33,514	32,657	48,545	58,752
Taxed off ... ..	9,620	8,766	7,405	12,966	14,036
Amount Allowed... ..	26,636	24,748	25,232	35,579	44,715
Court Costs of Taxation... ..	538	449	510	719	1,121

Between 1914 and 1917 there was a marked decrease in litigation in this jurisdiction, but since then activity has increased rapidly and the number of writs issued in 1921 was more than 50 per cent. greater than in 1914. The difference between the numbers of writs issued and judgments signed indicates the extent to which suits are settled out of court or not proceeded with. The difference between the number of judgments signed and the number of causes set down indicates the extent to which cases are legally settled without proceedings in court.

#### *Equity Jurisdiction.*

The present jurisdiction of the Supreme Court in Equity (which includes Infancy) dates from 1828. It is exercised by the Chief Judge in Equity, by the Judge in Bankruptcy sitting in Equity, or by either sitting on appeal with two other Judges. The procedure of the Court is governed by the Equity Act, 1901, and subsidiary rules. The jurisdiction extends to granting equitable relief by enforcing rights not recognised at Common Law through the issue of injunctions, writs of specific performance, and the award of damages. The Court in making binding declarations of right may obtain the assistance of specialists such as actuaries, engineers, or other persons. In deciding legal rights incidental to its cases, it exercises all the powers of the Common Law jurisdiction of the Supreme Court.

Attached to the Court there is a Master in Equity who performs administrative duties and acts for the Judge where directed in determining certain minor matters, such as conducting inquiries and taxing costs. He is also Registrar of the Court, and controls the records and funds within its charge.

The numbers of the various transactions of the Court during each of the last five years were as follow :—

Year.	Statements of Claims.	Statements of Defence.	Petitions.	Summonses.	Motions.	Decrees, Orders, and Certificates.	Trust Funds Invested.
							£
1917	189	85	95	165	209	1,048	748,806
1918	191	108	62	149	125	1,172	660,314
1919	227	164	67	118	225	1,076	594,105
1920	160	71	35	81	126	485	645,260
1921	298	181	94	125	199	852	712,687

The amount of trust funds invested under Equity Jurisdiction was distributed chiefly among war loans, mortgages, and funded stock, the rates of interest ranging from 3 to 7 per cent.

The amount of court fees received in 1921 was £5,184.

#### *Lunacy Jurisdiction.*

Jurisdiction in Lunacy was conferred on the Supreme Court in 1824 by the Charter of Justice, and is now exercised as a separate jurisdiction by the Chief Judge in Equity. There is a Master in Lunacy (who is also Master in Equity) to perform administrative work and manage estates. The Court upon hearing evidence, with or without examination of the person, may declare any person to be of unsound mind or incapable of managing his own affairs, or it may direct that such question be determined by a jury of four or twelve persons. When such a declaration is made the Master in Lunacy may assume the management of such person's estate until his discharge or death, or a committee of management may be appointed subject to supervision by the Master in Lunacy.

The amount of trust funds of insane persons and patients vested in the Master in Lunacy at the end of 1921 was £415,278.

#### *Bankruptcy Jurisdiction.*

Jurisdiction in Bankruptcy was conferred on the Supreme Court by statute in 1887. Bankruptcy law and procedure in New South Wales were virtually codified by the consolidating Act of 1898. Under the law any person unable to meet his debts may surrender his estate for the benefit of his creditors, or the latter may apply for compulsory sequestration under certain conditions. The jurisdiction of the Court extends over all these matters and its functions are to guard against fraud on the part of bankrupts, to distribute assets, and to relieve debtors of overwhelming obligations.

There is one Judge in Bankruptcy who exercises general control over bankruptcy proceedings and determines questions of law, equity or fact affecting a bankrupt estate. Questions of fact may be tried before a jury.

The Registrar of the Bankruptcy Court performs administrative duties and duties delegated by the Judge. He may hear debtors' petitions, make full examination of bankrupts or of persons suspected to be indebted to a bankrupt, and make sequestration orders. Certain of these powers are delegated in country districts to police magistrates and registrars of



District Courts, but appeal lies in all cases to the Judge in Bankruptcy and thence to the Full Court. An official assignee may be appointed by the Court to manage any assigned estate for the benefit of creditors.

Particulars of the operations of the Court in the past five years are given below :—

Heading.	1917.	1918.	1919.	1920.	1921.
Sequestration Orders ... ..	267	264	282	289	324
Estates released ... ..	34	25	28	28	30
Certificates of Discharge granted ... ..	36	45	54	53	49
Certificates of Discharge suspended ... ..	79	81	100	82	110
Court Fees ... .. £	3,464	3,394	3,645	4,192	4,386

Further details of proceedings in bankruptcy are published in the chapter, Private Finance, of this Year Book.

#### *Probate Jurisdiction.*

Probate jurisdiction was conferred on the Supreme Court in part by the Charter of Justice in 1824. By the Wills, Probate and Administration Act, 1898, it now extends over all property in New South Wales of deceased persons, whether testate or intestate. The jurisdiction is exercised by a Probate Judge (who is also Judge in Bankruptcy), or by any judge acting on his behalf. He may grant probate or letters of administration of deceased estates after due inquiry and compliance with laws as to stamp duties. Formal duties in the granting of probate and letters of administration are delegated to a Registrar of Probates, in accordance with the rules of the Supreme Court, where estates do not exceed £1,000 in value, and where no contention has arisen. The Registrar may appoint local agents to receive applications for probate.

Until the granting of probate or letters of administration the property of deceased persons vests in the Judge, and cannot legally be dealt with except in minor matters. In this way the rights of the successors, the creditors, and the State are safeguarded. Cases of disputed wills are tried by the Judge, with or without a jury, to determine issues of fact, and jurisdiction is exercised over administrators and executors.

Administrative functions in regard to intestate estates are performed by the Public Trustee under an Act of 1913.

The following table shows the number and values of estates dealt with by the Court in the past five years :—

Year.	Probates Granted.		Letters of Administration.		Total.	
	Number of Estates.	Value of Estates.	Number of Estates.	Value of Estates.	Number of Estates.	Value of Estates.
1917	6,036	£ 12,583,840	2,083	£ 1,477,852	8,119	£ 14,061,692
1918	4,128	12,335,103	3,140	1,666,256	7,268	14,001,359
1919	4,428	16,819,772	3,265	1,241,091	7,693	18,060,863
1920	3,570	26,191,030	2,428	1,514,783	5,998	27,705,813
1921	3,765	14,495,600	2,080	2,042,306	5,845	16,537,906

The values shown above represent the gross value of estates, inclusive of those not subject to duty, and of estates dealt with by the Public Trustee.\* Where estates are less than £300 in value probate or letters of administration may be granted on personal application to the Registrar, without the intervention of a solicitor. There were 339 such cases in 1921, the total value of estates being £51,117.

*Jurisdiction in Matrimonial Causes (Divorce).*

This jurisdiction was conferred on the Supreme Court by the Matrimonial Causes Act, 1873, prior to which marriages could be dissolved only by Special Act of Parliament. This Act, with its amendments, was consolidated in 1899. A Judge of the Supreme Court is appointed Judge in Divorce, but any other judge may act for him. The forms of relief granted are dissolution of marriage, judicial separation, declaration of nullity of marriage, and orders for restitution of conjugal rights. Orders for the custody of children, alimony, damages, and settlement of marriage property may be made. Decrees for the dissolution of marriage are usually made provisional for a short period, and absolute at the expiration thereof if no reason to the contrary is shown as, *e.g.*, collusion.

The grounds on which dissolution may be granted on petition are as follow:—

*Husband v. Wife.*—Adultery; desertion or habitual drunkenness and neglect of domestic duties for three years; refusal to obey an order for restitution of conjugal rights; imprisonment for three years and upwards at date when petition is presented and under sentence for at least seven years; conviction for attempt to murder or to inflict grievous bodily harm; repeated assaults and cruel beatings during one year preceding the date of filing the petition.

*Wife v. Husband.*—Adultery; desertion for three years or upwards; habitual drunkenness, coupled with neglect to support or cruelty, for three years; refusal to obey an order for restitution of conjugal rights; imprisonment for three years and upwards at date when petition is presented and under sentence for at least seven years; imprisonment under frequent sentences aggregating three years within five years preceding the presentation of the petition; conviction for attempt to murder or to inflict grievous bodily harm; repeated assaults and cruel beatings within one year of petition.

Cases are heard usually without a jury, but where dissolution of marriage is involved a jury of twelve to try issues of fact may be requisitioned by either party, or by the Court. Certain cases may be referred to the District Court of the district in which the case arose.

Usually, the petitioner must have been domiciled in the State for at least three years preceding the date of the petition. No relief is granted to persons who have resorted to New South Wales for the purpose of instituting proceedings.

Suits may be instituted for the purpose of obtaining restitution of conjugal rights, and failure to comply with a decree made in such a suit constitutes desertion, upon which a suit for divorce may be brought. A marriage may be declared null and void on the grounds that the respondent is incapable of consummating it, that the parties to the marriage are within the prohibited degrees of consanguinity, or that the parties are unable to contract a valid marriage. Such inability may arise from one of the parties being already married, having acted under duress, or being under marriageable age.

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\* Further particulars are published in the chapter "Private Finance."

The following statement shows the number of petitions in matrimonial causes made and granted in New South Wales during the past five years in comparison with the average per year between 1908 and 1912 :—

Year.	Total Number of Petitions Lodged	Number of Petitions Granted.					Restitution of Conjugal Rights.	
		Divorces.		Judicial Separation	Nullity of Marriage.		Petitions.	Decrees granted.
		Decrees Nisi.	Decrees Absolute.		Decrees Nisi.	Decrees Absolute.		
1908-12*	453	260	260	12	4	4	28	18
1917	783	434	380	13	5	3	98	65
1918	796	383	376	11	4	4	138	57
1919	1,052	618	420	7	5	7	260	122
1920	1,155	624	553	11	8	3	275	163
1921	1,094	1,038	782	18	8	7	259	217

\* Average per year.

The number of petitions lodged *in forma pauperis* during 1921 was 243, of which 220 were for divorce, 6 for nullity of marriage, 3 for judicial separation, and 14 for restitution of conjugal rights.

The numbers of petitioners of each sex in cases where decrees for divorce or nullity of marriage were made absolute, or judicial separation was granted, during each of the past ten years were as follow :—

Year.	Number of Successful Petitions lodged by			Year.	Number of Successful Petitions lodged by		
	Husband.	Wife.	Total.		Husband.	Wife.	Total.
1912	121	240	361	1917	147	249	396
1913	131	195	326	1918	167	224	391
1914	126	177	303	1919	190	244	434
1915	134	221	355	1920	267	300	567
1916	141	231	372	1921	389	418	807

The annual number of cases in which marriage was dissolved, or virtually dissolved, has more than doubled since the termination of the war, and, although the majority of petitions are still lodged by wives, the proportion of petitions lodged by husbands has increased rapidly.

The grounds of suits in which decrees for divorce or nullity of marriage were made absolute during each of the past five years were as follow :—

Ground of Suit.	1917.	1918.	1919.	1920.	1921.
Adultery ... ..	104	104	119	202	263
„ coupled with Bigamy, Cruelty, or Desertion ... ..	5	8	10	7	10
Cruelty and Repeated Assaults ... ..	1	2	1	3	1
„ „ Habitual Drunkenness ... ..	10	4	2	8	7
Desertion ... ..	208	188	248	255	359
Habitual Drunkenness and Neglect to Support ... ..	8	3	1	3	4
Habitual Drunkenness and Neglect of Domestic Duties ... ..	2	5	3	5	6
Imprisonment of Husband for Three Years ... ..	2	1	...	1	3
Non-compliance with Order for Restitution of Conjugal Rights ... ..	41	64	39	71	135
Impotency or Non-consummation ... ..	2	1	4	1	1
Total ... ..	383	380	427	556	789

*Admiralty Jurisdiction.*

Jurisdiction as a Colonial Court of Admiralty was conferred on the Supreme Court of New South Wales on 1st July, 1911, by Order-in-Council under the Imperial Admiralty Act, 1890. The Court may also sit as a Prize Court by authority of a proclamation of August, 1914, under the Imperial Prize Court Act, 1894.

## LOWER COURTS OF CRIMINAL JURISDICTION.

*Courts of Petty Sessions (Police Courts).*

These Courts are held daily in large centres, and periodically as occasion demands in small centres. They operate under various statutes (chiefly the Crimes Act, 1900, and Police Offences Act, 1901), which describe the nature of offences, penalties, and certain procedure, and prescribe the number of justices or magistrates who must try various offences. Cases are heard by a Stipendiary Magistrate in the Sydney, Parramatta, Newcastle, Bathurst, and Wollongong districts, and in other districts by a Police Magistrate, or by Justices of the Peace. The procedure is governed in a general way by the Justices Act, 1902-18. These courts deal with minor offences, permitting of summary treatment; while serious charges are investigated in the first instance, and the accused remanded to higher courts when a reasonable case is made out.

Offences punishable summarily by Courts of Petty Sessions include most offences against good order and breaches of regulations. Certain offences are made punishable summarily with the consent of the accused. The court also deals with certain other cases, such as proceedings arising under the Master and Servants Act, the Deserted Wives and Children Act, and administrative regulations.

Appeal against fine or imprisonment is heard by the Court of Quarter Sessions, but on a disputed point of law the magistrate may state a case for the Supreme Court.

*Children's Courts.*

Children's Courts were established by proclamation under the Infant Protection Act, 1904, and the Neglected Children and Juvenile Offenders Act, 1905. They are presided over by a special magistrate, or two Justices of the Peace specially appointed, who exercise all the powers of a Police or Stipendiary Magistrate in respect of cases involving children as parties or witnesses to the exclusion of ordinary courts of law. By this means children are protected against the adverse influences which they would encounter in ordinary courts of law.

The jurisdiction embraces proceedings concerning maintenance of infants, offences by or against children, and neglected or uncontrollable children. The Court is endowed with extensive punitive powers, such as the committal of children to reformatory homes.

Appeal from its decisions lies in proper cases to the District or Supreme Courts.

Separate statistics of the proceedings of Children's Courts are not now available, being included with those relating to ordinary Courts of Petty Sessions. Particulars of cases regarding neglected children are published in part Social Condition of the Statistical Register and of this Year Book.

*Cases before Magistrates' Courts.*

Particulars of the number of offences charged, and convictions obtained in Courts of Petty Sessions and Children's Courts, are shown below. Except where otherwise stated the figures represent the total number of cases. Unfortunately it is not possible to determine the number of distinct persons charged each year. Upon arrest, many persons give assumed names

particularly vagrant offenders who move from place to place, often appearing before the court, seldom giving the same name, and often altering their stated nationality, religion, and occupation in order to make identification difficult. Where multiple charges are preferred separate account is taken of each.

Number of Offences.	1901.	1911.	1919.	1920	1921.
Heard in Court ... ..	64,625	75,114	71,627	79,708	85,680
Bail forfeited ... ..	†	†	6,476	9,864	9,005†
Total, offences charged ...	64,625	75,114	78,103	89,572	94,685
Convictions ... ..	48,962*	65,058	58,042	64,803	71,358
Committed for trial to Higher Courts. }	1,415	1,178	1,680	2,239	2,594
Bail forfeited ... ..	†	†	6,476	9,864	9,005†
Total convictions, committals, &c. }	50,224*	66,236	66,198	76,906	82,957

\* Individual persons only. † Included above. ‡ Drunkenness cases only, remainder included above.

Toward the end of 1916 provision was made whereby persons arrested for drunkenness only were allowed to forfeit a deposit (nominally bail) of 5s. (the usual penalty imposed) in lieu of appearing in court. Approximately one-third of the cases of drunkenness are now dealt with in this manner.

The following table shows the proportion of summary convictions (including cases of bail forfeited), of acquittals and discharges, and the committals to higher courts by magistrates, at intervals since 1890 :—

Year.	Summary Convictions.*	Acquittals and Discharges.	Committals to Higher Courts.
	per cent.	per cent.	per cent.
1890	80·4	16·0	3·6
1900	83·1	14·9	2·0
1910	86·1	12·3	1·6
1915	84·6	13·6	1·8
1920	84·3	13·2	2·5
1921	84·6	12·7	2·7

\* Including bail forfeited.

Only a small proportion of the offences for which summary convictions were effected during 1921 were really criminal offences, that is offences against person or property. Following is a classification of summary convictions for various classes of offences, showing also the rate to the mean population :—

Year.	Number of Convictions for Minor Offences.							
	Against the Person.	Against Property	Against Good Order.		Against Local Government Acts.	Against Traffic Regulations.	Other Offences.	Total Summary Convictions.
			Drunkenness.	Other.				
1906	1,619	3,857	25,253	15,920	†	†	13,251	59,900
1911	1,664	3,404	29,299	14,886	†	†	15,805	65,058
1919	1,906	5,320	19,546*	12,512	4,425	3,788	17,011	64,518
1920	1,925	5,772	25,843*	14,180	4,015	4,620	18,312	74,667
1921	2,127	5,924	28,702*	18,086	3,636	4,510	17,368	80,353
Per 1,000 of Mean Population.								
1906	1·09	2·60	17·01	10·72	†	†	8·93	40·35
1911	1·00	2·04	17·60	8·94	†	†	9·49	39·07
1919	·95	2·65	9·74*	6·23	2·21	1·89	8·47	32·14
1920	·93	2·79	12·49*	6·86	1·94	2·23	8·85	36·09
1921	1·01	2·81	13·61*	8·58	1·72	2·14	8·24	38·11

\* Including cases in which bail was forfeited, the persons concerned not appearing in court.

† Not available.

The number of minor offences leading to summary convictions declined during the war owing partly to the fact that large numbers of men were within military jurisdiction or on active service abroad, and to other factors connected with the war. By 1921 normal conditions had been practically restored, and, although a very large increase occurred in the number of summary convictions, the proportion to the population was smaller than in pre-war years. This decline was due principally to a diminution in the number of convictions for drunkenness, increases being shown in the number of offences against property and offences against administrative laws.

In many instances, offences against Local Government laws, traffic regulations, and other laws are minor breaches, or are committed in ignorance of the law, and are met with the infliction of nominal fines. Thus there were 25,528 convictions for offences against specified administrative laws in 1921. In only 438 cases was imprisonment inflicted, and most of these were in default of paying fines. These offences included (in addition to those shown above under the headings "Local Government" and "Traffic") 4,557 offences against revenue laws during 1921; 2,382 against liquor laws; 1,299 against laws for the suppression of gambling; 982 under the Factory Act; 866 against railway and tramway regulations; 820 under the Health Act; 770 under the Defence Act; 584 under the Education Act, and 540 against the Pastures Protection Act.

#### *Punishment on Summary Conviction.*

The number of offences punished summarily by fine and imprisonment respectively during the last five years are shown in the following table, together with the disposition of the amount of fines imposed:—

Classification.	1917.	1918.	1919.	1920.	1921.
Summary convictions punished by—					
Fine ... ..	48,445	48,817	50,709	57,674	64,216
Imprisonment† ... ..	2,014	2,032	1,874	2,057	2,577
Otherwise dealt with* ... ..	6,097	7,160	5,469	5,072	4,926
Total* ... ..	56,556	58,009	58,042	64,803	71,219
Fines imposed paid to—	£	£	£	£	£
Consolidated Revenue ... ..	27,451	30,756	32,596	43,993	40,839
Police Reward Fund ... ..	13,846	16,132	17,570	21,406	21,597
Municipalities and Shires ... ..	4,459	4,300	4,681	4,679	4,209
Informers ... ..	2,753	3,552	4,092	5,164	4,749
Other ... ..	3,714	5,748	5,330	5,036	4,050
Total, State ... £	52,223	60,488	64,269	80,278	75,444
Paid to Commonwealth Government ... .. £	2,344	6,140	7,357	5,328	11,481

\*Excluding cases of bail forfeited.

†Peremptory.

In addition to the number of offenders committed to peremptory imprisonment a considerable number of those punished by fines were imprisoned also in default of payment of fines. Particulars of these, and of the amount of fines paid by them in lieu of part of the alternative imprisonment, appear on page .

#### *Coroners' Courts.*

The office of Coroner was established in New South Wales by letters patent in 1787, and is now regulated by the Coroners' Act, 1912, which consolidated previous laws.

Every Stipendiary or Police Magistrate has the powers and duties of a coroner in all parts of the State, except the Metropolitan Police District, which is under the jurisdiction of the City Coroner. In districts not readily accessible by Police Magistrates, a Justice of the Peace is usually appointed coroner.

At the discretion of the Coroner, inquiries are held into the causes of all violent or unnatural deaths, into the causes of all deaths in gaols, and into the origin of fires causing damage or destruction to property, but may be dispensed with where the coroner deems inquiry unnecessary. The Coroner may order the attendance of any medical practitioner at the inquest, and may direct him to hold a post-mortem examination. On the evidence submitted the Coroner is empowered to commit for trial persons adjudged guilty of manslaughter, murder, or arson.

In certain cases a jury of six persons may be empanelled to find as to the facts of the case, and on their verdict against any person he may be committed for trial.

During 1921, 1,338 inquiries were held by coroners into causes of death and 153 into the origin of fires. Twenty persons were committed for trial on charges of murder, 16 for manslaughter, and 5 for arson. It was also found that 17 fires were caused wilfully.

#### HIGHER COURTS OF CRIMINAL JURISDICTION.

These consist of the Central Criminal Court (which sits in Sydney and is presided over by a Judge of the Supreme Court), of the Supreme Court on circuit, and of Courts of Quarter Sessions, held at important centres throughout the State, each presided over by a Judge of the District Court as chairman. These courts deal with indictable offences which comprise the more serious criminal cases. Offences punishable by death may be tried only before the Central Criminal Court, which exercises the criminal jurisdiction of the Supreme Court.

All persons charged with criminal offences must be charged before a judge, with a jury of twelve chosen by lot from a panel provided by the sheriff. The jury finds as to the facts of the case, and its verdict must be unanimous. If unanimity is not reached within twelve hours a verdict is not returned, and the accused may be tried again before another jury.

#### *Courts of Quarter Sessions.*

These Courts are held at times and places appointed by the Governor-in-Council, in districts which coincide with those of District Courts. Forty-three places were appointed in 1921, courts being held usually at the conclusion of District Court sittings, three times a year in country centres, but eleven times in Sydney, and six times in Parramatta.

In addition to exercising their original jurisdiction, the courts hear appeals from Courts of Petty Sessions and certain appeals from other courts, *e.g.*, Licensing courts. Appeals from Quarter Sessions are heard by the Court of Criminal Appeal.

#### *Central Criminal Court and Circuit Courts.*

The Central Criminal Court exercises the criminal jurisdiction of the Supreme Court in Sydney, and a Judge of the Supreme Court exercises at appointed circuit towns a similar jurisdiction. Usually capital offences, the more serious indictable offences committed in the metropolitan area, and offences not conveniently triable at Quarter Sessions, or at Circuit Courts in the country, are tried at the Central Criminal Court. A Judge of the Supreme Court sitting in Sydney may act as a Court of Gaol Delivery, to hear and determine the cases of untried prisoners upon returns of such prisoners supplied by the gaolers of the State under rules of the Court.

*Cases before Higher Criminal Courts.*

The following table shows for the years immediately preceding and succeeding the war, the number of persons convicted for each of the classes of more serious offences. Where two or more charges were preferred against the same person account is taken only of the principal charge.

Class of Offences.	Number of Offenders Convicted.							
	1911.	1912.	1913.	1919.	1920.	1921.		
						Males.	Females	Total.
Against the person .. ..	141	136	189	150	169	147	19	166
Against property .. ..	313	410	478	536	801	811	42	853
Forgery and offences against the currency .. ..	48	48	60	34	33	45	3	48
Against good order [.. ..]	14	2	11	8	6	2	...	2
Other offences .. ..	22	24	34	34	18	35	7	42
Total offenders convicted ..	538	620	772	762	1,027	1,040	71	1,111
Offenders convicted per 10,000 of population ..	3.23	3.55	4.24	3.81	4.96	9.67	.69	5.27

The number of offenders convicted for serious crime increased very considerably in proportion to the population during the three years preceding the outbreak of war, but special circumstances brought about by the war were responsible for a diminution in the number. Conditions did not revert to normal until 1920, and the proportional number of convictions in that and the succeeding year showed a pronounced increase over pre-war proportions. This marked increase in post-war crime has been confined solely to offences against property.

Approximately one male in every thousand was convicted for a serious criminal offence in 1921, the proportion of women being much less than one per ten thousand.

The following table shows the number of persons convicted for specific offences included in the foregoing statement :—

Offences.	Number of Offenders Convicted.						
	1911.	1912.	1913.	1919.	1920.	1921.	
Murder .. ..	3	12	7	2	8	8	
Attempted Murder and Shooting with Intent	3	2	4	6	8	3	
Manslaughter .. ..	4	4	7	11	12	13	
Rape and other Offences against Females ..	29	33	38	21	34	21	
Unnatural Offences .. ..	2	3	9	24	17	23	
Abortion and Attempts to Procure .. ..	3	1	...	...	1	2	
Bigamy .. ..	16	8	9	22	22	22	
Assault .. ..	80	66	106	52	64	63	
Burglary and Housebreaking .. ..	62	89	107	139	255	244	
Robbery and Stealing from the Person ..	14	39	51	19	50	35	
Stealing Horses, Cattle, Sheep .. ..	26	33	34	29	41	48	
Embezzlement and Stealing by Servants ..	26	26	27	22	33	42	
Larceny and Receiving .. ..	131	164	201	252	330	376	
Fraud and False Pretences .. ..	38	37	36	47	55	80	
Arson .. ..	...	4	4	2	1	1	
Forgery, &c. .. ..	41	38	55	33	33	44	
Conspiracy .. ..	10	4	10	14	7	16	
Perjury and Subornation .. ..	10	8	12	6	4	17	



In so far as the number of persons convicted indicates the vogue of crime, the above statement shows that during post-war as compared with pre-war years, and considering the increase in population, there was a small proportional increase in the number of crimes connected with the taking of life, and more pronounced increases in unnatural offences, bigamy, and particularly in burglary and larceny. On the other hand considerable decreases took place in the proportionate number of assaults, cases of robbery, forgery, and offences against females.

In view of the fact that trials of accused persons in higher criminal courts take place on indictment by the Attorney-General, and usually after magisterial inquiry into the sufficiency of evidence for such trials, and that the question of guilt is decided by a jury of laymen, it is interesting to note that only about two-thirds of the persons charged are convicted, and in the case of offences against the person, this proportion is usually about one-half. During 1921, the total number of persons charged in higher criminal courts was 1,722, and of these 1,111 were convicted.

#### OTHER COURTS OF STATE JURISDICTION.

Special courts have been established in New South Wales in other provinces of law. These are the Land and Valuation Court and Local Land Boards and the Industrial Arbitration Courts, with subsidiary Industrial Boards and the Board of Trade.

##### *Local Land Boards.\**

Local Land Boards consisting of a salaried chairman, usually possessing legal and administrative experience, and of two other members (paid by fees) possessing local knowledge, were first appointed under the Crown Lands Act of 1884. These boards sit as open courts, and follow procedure similar to that of Courts of Petty Sessions. Their functions are to determine questions under the Crown Lands Act, and other matters of reference by the Minister. Sittings are held as required at appointed places in each of thirteen Land Board Districts in the Eastern and Central Divisions of the State.

During the year ended 30th June, 1921, the various Boards held 513 meetings, lasting 876 days; 10,765 cases were dealt with by full boards, and 11,338 by the various chairmen.

##### *Land and Valuation Court.\**

The Land Court of Appeal, established originally in 1889, was re-constituted at the close of 1921 as the Land and Valuation Court. This court is presided over by a judge, whose status is equal to that of a Judge of the Supreme Court, and who may sit as an open court at such places as he determines, with two assessors in an advisory capacity. The procedure of the court is governed by rules made by the Judge, who also exercises powers over witnesses and the production of evidence similar to those of a Judge in the Supreme Court.

Broadly stated, the functions of the court are to hear and determine all the more important matters and appeals arising under the Crown Lands Acts and cognate acts, cases involving the ratable-ness of lands and the more important appeals from valuations made by the Valuer-General or by valuers under the Local Government Act.

This court commenced operations in 1922. During different parts of the year ended 30th June, 1922, the Land Appeal Court and the Land and Valuation Court sat and dealt with 83 references, 61 appeals (10 being sustained) under various land acts; 805 objections to valuations under the

\*See, also, chapter on Land Legislation and Settlement.

Valuation of Land Act, of which 83 were upheld, 147 dismissed, 294 otherwise settled, and 281 withdrawn; and 91 objections to Local Government assessments for rating, 82 being upheld, 2 dismissed and 7 otherwise settled.

#### COURTS OF INDUSTRIAL ARBITRATION.

A system of industrial arbitration was inaugurated in 1901, when courts of law were first established to determine certain disputes between employers and employees relating to working conditions. The statutory basis of the present court is the Industrial Arbitration Act, 1912, with subsequent amendments. The court consists of a senior judge and three additional judges. Its functions are to make awards governing the working conditions of industries, to impose penalties in cases of illegal strikes, lockouts, or unlawful dismissal, and to vary or amend awards. It also hears appeals from the industrial registrar and industrial magistrate.

Industrial magistrates are appointed under the Act of 1912, with jurisdiction over cases arising out of non-compliance with awards, and statutes governing working conditions of employees. Their powers are cognate with those of police magistrates.

The Board of Trade determines from time to time such general questions as the amount of the living wage and hours of employment.

Details of the constitution and operations of these Courts are published in the chapter on Employment and Production of this Year Book.

#### COURTS OF FEDERAL JURISDICTION.

By the Commonwealth Judiciary Act, 1903-1920, jurisdiction under Federal laws is vested in the several courts of the States within the limits of their several jurisdictions, as to locality, subject-matter, etc. Justices of the Peace are, however, precluded from exercising Federal jurisdiction. Certain acts (*e.g.*, the Postal Act and Customs Act) also confer jurisdiction in special cases in State Courts.

There are two Commonwealth courts which possess certain jurisdiction, exclusive of State courts, these are the High Court of Australia and the Commonwealth Court of Conciliation and Arbitration.\*

##### *High Court of Australia.*

This Court was established in 1903 and consists of a Chief Justice and six puisne justices. Its principal seat is at the seat of Government, but sittings are held in the various States, and district registrars are appointed as required. The jurisdiction of the Court, which may be exercised in the first instance by one judge, is exclusive with regard to suits between States or any State and the Commonwealth, matters arising directly under a treaty, or writs of mandamus or prohibition against a Federal officer or court.

The High Court is also constituted as a Court of Appeal for all Australia.

#### COURTS OF APPELLATE JURISDICTION.

Generally speaking appellate jurisdiction is exercised, in cases where appeals are permitted, by the Courts of Quarter Sessions from Magistrates' Courts, by the Supreme Court from District Courts, by the High Court of Australia from the Supreme Court, and (in certain cases) by the Privy Council from either of the two last-named courts. Appeal on points of law (usually by stating a case) may be made to the Supreme Court from any special (*e.g.* Land or Industrial Arbitration) or ordinary court of the State.

A Court of Criminal Appeal, presided over by Judges of the Supreme Court, was established in 1912.

\*Particulars of this court may be found in the chapter on "Employment and Production" of the Year Book.

*Civil Appeals to the Supreme Court.*

Three or more Judges of the Supreme Court may sit in its various civil jurisdictions (1) *in Banco*, to hear appeals from District Courts or from decisions of justices in chambers, and to consider motions for a new trial and kindred matters—(in certain circumstances such cases may be heard by one justice); (2) as a Full Court of three or more justices, to hear appeals from orders and decrees made by one justice in the various jurisdictions of the court; (3) one judge may sit in chambers to hear applications for writs of mandamus or prohibition, and to determine special cases stated by magistrates.

During 1921, 36 motions for new trials were heard by the Full Court at Common Law, 10 being granted, 14 refused, and 12 not proceeded with. Two appeals in Equity, and 2 in Divorce were disallowed. Of 16 appeals from judgments in District Courts, 5 were allowed, 5 dismissed, and 6 were not proceeded with. In addition, 11 writs of prohibition were granted, and 5 refused, and in special cases stated by magistrates, the magisterial finding was sustained in 7 cases, and reversed in 6. Five writs of prohibition were granted and 5 refused, by Judges in Chambers, and 1 writ of mandamus was also refused, while in 9 special cases the decisions of Magistrates' Courts were upheld and in 5 reversed.

*Appeals to the High Court of Australia.*

Appeal to the High Court of Australia from judgments of the Supreme Court of New South Wales may be made in any case by permission of the High Court, and as of right in cases involving a matter valued at £300 or more, or involving the status of any person under laws relating to aliens, marriage, divorce or bankruptcy, provided that appeal lay to the Privy Council in such case at the date of establishment of the Commonwealth. Such appeal may be made irrespective of whether any State law provides that the decision of the Supreme Court is final.

During 1921 the appeals heard by the High Court were as follow :—From a single judge exercising jurisdiction of the Supreme Court at Common Law, 2 allowed, 1 dismissed; Equity, 2 allowed, 2 dismissed; Bankruptcy, 1 allowed; Divorce, 1 dismissed. From the Full Court of the Supreme Court, 5 allowed, 4 dismissed, 4 otherwise settled. In addition, 8 appeals were heard from assessments under the Federal Land Tax Act, and of these 4 were allowed 2 dismissed, and 2 otherwise settled. One appeal was allowed from a decision by a judge exercising Federal jurisdiction in New South Wales.

*Appeals to the Privy Council.*

Appeals from dominion courts to the Crown-in-Council are now heard by the Judicial Committee of the Privy Council. Such appeals are heard by virtue of the royal prerogative to review decisions of all Courts of the dominions, which can be limited only by Act of Parliament.

The cases which may be heard on appeal by the Judicial Committee were defined by Order-in-Council in 1909. Appeal may be made as of right from determinations of the Supreme Court involving any property or right to the value of £500 or more, and as of grace from the Supreme or High Court in any matter of substantial importance, including criminal cases in special circumstances. Except where the High Court consents no appeal may be made to the Privy Council upon any question as to the limits *inter se* of the constitutional powers of the Commonwealth or States.

The number of applications to the Privy Council for leave to appeal during the past ten years was 25, of which 24 were granted. Of these 20 were determined, 7 being upheld, and 13 dismissed. In addition, 5 notices of appeal at Admiralty were lodged, of which 4 were determined, 1 being dismissed.

## APPEALS IN CRIMINAL CASES.

*Appeals to Quarter Sessions.*

The right of appeal from Courts of Petty Sessions to Courts of Quarter Sessions lies against all convictions or orders by magistrates, excepting adjudication to imprisonment for failure to comply with an order for the payment of money, for the finding of sureties for entering into a recognisance or for giving security, and orders for the payment of wages and convictions for breaches of discipline under the Seamen's Act, 1898. The Appeal Court rehears the cases, deciding questions of fact as well as of law.

The results of appeals from Courts of Petty Sessions during the last five years are shown below :—

Year.	Cases not Concluded.	No. of Cases in which Conviction or Order was—			Total Cases Concluded.
		Confirmed.	Varied.	Quashed.	
1917	93	305	34	106	445
1918	99	365	55	106	526
1919	105	312	39	139	490
1920	87	443	69	154	666
1921	107	456	109	154	719

Appeals are made from approximately 1 per cent. of the convictions in Magistrates' Courts. In 1921 convictions were quashed in 21 per cent. of the cases concluded, and varied in 15 per cent. of such cases.

*Court of Criminal Appeal.*

The Court of Criminal Appeal was established by the Criminal Appeal Act of 1912, which prescribes that the Supreme Court shall be the Court of Criminal Appeal, constituted by three or more Judges of the Supreme Court as the Chief Justice may direct. Any person convicted on indictment may appeal to the Court against his conviction (1) on any ground which involves a question of law alone, or (2) with the leave of the Court or upon the certificate of the judge of the court of trial, on any ground which involves a question of fact alone, or of mixed law and fact, or any other ground which appears to the Court to be sufficient. A convicted person may also, with the leave of the Court, appeal against the sentence passed on conviction; in such appeal the Court may quash the sentence and substitute another either more or less severe.

In addition to determining appeals in ordinary cases the Court has power, in special cases, to record a verdict and pass a sentence in substitution for the verdict and sentence of the court of trial; it may also grant a new trial, either on its own motion or on application of the appellant.

The result of appeals during the last five years is shown hereunder :—

Year.	Applications to Judge.		Applications to Court.				Sentences Varied (included in Convictions Affirmed).
	Granted.	Refused.	Convictions.		New Trials Granted.	Total Cases.	
			Affirmed.	Quashed.			
1917	1	8	62	4	3	69	2
1918	1	1	19	3	4	26	2
1919	...	...	19	3	...	22	2
1920	...	...	40	2	6	48	3
1921	...	...	39	2	3	44	...

The number of appeal cases heard in 1921 was approximately 4 per cent. of the convictions of that year.

## ADMINISTRATION OF LAW.

In New South Wales the duty of administering laws is allotted to Ministers of the Crown in their respective spheres, and a table of Acts administered by each Minister, may be found in "The New South Wales Parliamentary Companion." At least two members of the Cabinet are allotted the special functions involved in the administration of justice and in transacting the legal business of the State. Usually an Attorney-General and a Minister of Justice are appointed, but sometimes these offices are combined and a Solicitor-General is included in the Cabinet. There is also a Crown Solicitor—a salaried public servant.

*Attorney-General.*

The Attorney-General is charged with the conduct of business relating to the High Courts (such as District and Supreme Courts), the offices of the Crown Solicitor, Crown Prosecutors, Clerk of the Peace, and Parliamentary Draftsmen, as well as statute law consolidation and certain Acts, including the Poor Persons' Defence Act and the Poor Persons' Legal Aid Act. Furthermore, he corresponds with other Ministers on questions of State on which his legal opinion is required, and with judges on matters within his control, initiates and defends proceedings by or against the State, and determines whether prosecution lies in cases of indictable offences.

*Minister of Justice.*

The Minister of Justice supervises the working of all magistrates' courts, of gaols and penal establishments, the infliction of punishment and execution of sentence in addition to the operations of the various offices connected with the Supreme and District Courts. He also administers Acts of Parliament relating to justices, juries, coroners, prisons and prisoners, criminals, inebriates and registration of firms, companies and licensed trades and callings.

## OFFICE AND TENURE OF MEMBERS OF THE JUDICIARY.

*Judges of the Supreme Court.*

Judges of the Supreme Court of New South Wales are styled "Justices," and are appointed by Commission of the Governor on the advice of the Executive Council. No person may be appointed Judge of the Supreme Court unless he is a barrister of five years standing. In addition to exercising legal jurisdiction the judges have power to make rules governing court procedure and to control the admission to practice of barristers and solicitors and to supervise their conduct.

A judge is immune from prosecution for the performance of his judicial duties within the scope of his jurisdiction. He holds office "during good behaviour" until the age of seventy years at a salary fixed by statute—£3,500 per annum to the Chief Justice and £2,600 per annum to each puisne judge. By these provisions the judiciary is rendered completely independent of the executive, but a judge may be removed from office by the Crown on the address of both Houses of Parliament.

*Judges of the District Court.*

Any barrister of five years standing or attorney of seven years standing may be appointed as judge of the District Court by the Governor, and may exercise the jurisdiction of the Court in districts allotted by the Governor. Such persons when appointed hold office during ability and good behaviour at a salary of £1,500 per annum, which may not be reduced during their

term of office. The Governor may remove from office any District Court Judge for inability or misbehaviour subject first to appeal to the Governor-in-Council. No judge may in any way engage in practice of the legal profession.

Certain ministerial functions are performed by magistrates and justices in addition to their judicial duties, but special officers are appointed for certain purposes in the administration of justice. These are: Crown Prosecutors appointed to act in Criminal Courts in prosecuting persons accused of indictable offences, Clerks of Petty Sessions, the Clerk of the Peace and his deputies, who act as Clerks for the Courts of Quarter Sessions, Registrars of the Small Debts and District Courts, and Bailiffs.

In connection with the Supreme Court there are two important officers in addition to those referred to in connection with special jurisdictions. These are the Prothonotary and the Sheriff.

#### *Prothonotary.*

The Prothonotary of the Supreme Court is its principal officer in the common law and criminal jurisdiction. He also acts as registrar to the Courts of Matrimonial Causes, Admiralty, and Criminal Appeal. The Prothonotary or his deputy may be empowered under rules of the court to transact business usually transacted by a judge sitting in chambers, except in respect of matters relating to liberty of the subject.

#### *Sheriff.*

The office of Sheriff was first established in New South Wales in 1824, and is now regulated by the Sheriff Act, 1900. There is a Sheriff and Under Sheriff. Sheriff's officers are stationed at convenient country centres, where there is a Deputy Sheriff—usually a Police Magistrate. The functions of the Sheriff include the enforcement of judgments and execution of writs of the Supreme Court, the summoning and supervision of juries, and administrative arrangements relating to the holding of courts.

#### *Magistrates.*

Magistrates are appointed from among members of the Public Service unless it is certified by the Public Service Board that no member of the service is suitable for such office. Persons so appointed must have attained the full age of thirty-five years, have passed the prescribed examination in law, and be prepared to reside permanently in the district to which they are appointed. Magistrates are required to take the judicial oath and the oath of allegiance, and they hold office at the pleasure of the Governor.

Within the districts of the Metropolis, Parramatta, Newcastle, Broken Hill, Bathurst, and Wollongong the jurisdiction of the Court of Petty Sessions is exercised exclusively by Stipendiary Magistrates. In country districts jurisdiction in Petty Sessions is exercised by Police Magistrates wherever convenient, and otherwise by honorary justices in minor cases. Police Magistrates were first appointed in 1837, and Stipendiary Magistrates in 1881.

The jurisdiction of magistrates is explained above in connection with Courts of Petty Sessions, and their functions comprise those of Justices of the Peace explained below. In addition they usually act in country centres as District Registrars in Bankruptcy, Revising Magistrate, visiting Justices to gaols, Deputy Sheriff, Mining Warden, Licensing Magistrate, and Industrial Magistrate.

At 30th June, 1921, there were fourteen Stipendiary Magistrates with salaries ranging from £683 to £975 per annum, and eighteen Police Magistrates with salaries ranging from £600 to £733.

#### *Justices of the Peace.*

The office of Justice of the Peace originated in England in the fourteenth century, and was introduced into New South Wales in 1788. It was for fifty years of considerable importance in the administration of justice, but the more important judicial functions are now exercised by judges of the District Court and by salaried magistrates.

Any person of mature age and good character may be appointed a Justice of the Peace by Commission, under the Grand Seal. The office is honorary, and is held during the pleasure of the Crown. No special qualifications in law are required of appointees, but they must be persons of standing in the community and take prescribed oaths.

The functions of justices are numerous, extending over the administration of justice generally, the maintenance of peace, and the judicial duties of the office. The judicial powers are explained in connection with the Courts of Petty Sessions, and other duties include the issue of warrants for arrests, issue of summonses, administration of oaths, and certification of documents.

At the end of 1922 there were approximately 14,000 Justices of the Peace in New South Wales, including 158 women. Women became eligible for the office under the Legal Status of Women Act, 1918.

#### *Registrar General.*

The Office of Registrar-General in New South Wales is that of registrar of certain occurrences and transactions of special legal significance as prescribed by Act of Parliament. Registrations are made of births, deaths and marriages; of deeds, titles to land, transfers, land leases; of mortgages and liens; of companies and firms, and of documents under the Real Property Act. These are usually available to the public. Fees are charged in most cases of registration and for inspection. The amount collected as fees for inspection and searches, and for public documents sold by the Registrar-General during 1921, was £188,035.

#### *Public Trustee.*

Under the Public Trustee Act, 1913, the functions of the Curator of Intestate Estates were taken over by the Public Trustee on 1st January, 1914. The Public Trustee acts as trustee under a will or marriage, or other settlement; executor of a will; administrator of a will where the executor declines to act, is dead or absent from the State; administrator of intestate estates, and as agent or attorney for any person who authorises him so to act. He is a *corporation sole* with perpetual succession and a seal of office and is subject to the control and orders of the Supreme Court.

Where the net value of an intestate estate does not exceed £100, the Public Trustee may pay the whole amount direct to the widow or apply the share of an infant of like amount to the maintenance of the infant. As attorney or agent he may collect rents or interest on investments, supervise repairs, prepare taxation returns, and pay taxes, &c. Agents of the Trustee are appointed in towns throughout the State.

Operations are not conducted for profit, and the fees and commission chargeable are regulated to provide sufficient money to cover working expenses only. The accounts of the Public Trust Office are audited by the Auditor-General.

The following is a summary of the transactions during the last five years :—

Particulars.	1918.	1919.	1920.	1921.*	1922.*
New Estates Administered—					
As Administrator ...	4,353	1,599	1,256	1,024	981
As Executor or Trustee ...	135	78	82	74	80
As Attorney or Agent ...	37	12	3	3	11
	£	£	£	£	£
Amount Received† ...	711,000	740,612	736,538	649,972	658,232
Amount Paid† ...	601,878	644,566	710,884	687,668	657,639
Commission and Fees ...	16,378	18,036	20,145	26,994	22,880
Unclaimed Money—					
Paid into Treasury ...	4,814	7,375	7,070	2,985	3,243
Subsequently Claimed...	274	241	594	1,210	1,231
Credit Balances of Estates* ...	1,469,761	1,797,318	2,091,235	2,189,090	2,425,477

\* Year ended 30th June. † On behalf of estates.

During the year ended 30th June, 1922, the operations resulted in a profit of £29, which increased the accumulated profits to £3,841.

#### *Poor Persons' Legal Expenses.*

Under the Poor Prisoners' Defence Act, 1907, any person committed for trial for an indictable offence may apply for legal aid for his defence before the jury is sworn. If the judge or committing magistrate considers that the person is without adequate means, and that such legal aid should be supplied, the Attorney-General may arrange for the defence of the accused and for payment of expenses of all material witnesses.

The Poor Persons' Legal Remedies Act, 1918, authorises judges to make rules regulating the practice and procedure, and the costs and fees payable in respect of proceedings to which poor persons are parties. Such proceedings may not be instituted without permission, and judges to whom applications for permission are made are authorised to act as conciliators. The rules made under this act do not apply to criminal proceedings.

#### PATENTS, COPYRIGHTS, TRADE MARKS, AND DESIGNS.

The administration of the statutes relating to Patents, Copyrights, Trade Marks, and Designs, devolves upon the Federal authorities, and a patent granted under the Commonwealth law is thus afforded protection in all the States, and in the Territory of Papua, for fourteen years. The copyright in a book, the performing right in a dramatic or musical work, and the lecturing right in a lecture, continue for the author's life and fifty years after his death. The British Copyright Act, subject to certain modifications, is in force in the Commonwealth under the Copyright Act, 1912.

The registration of a trade-mark protects it for fourteen years, but may be renewed from time to time. An industrial design may be protected for five years, and the period extended to fifteen years, provided it is used in Australia within two years of registration.



Under the various Federal Acts, arrangements may be made for the protection in other countries of patents, copyrights, trade-marks, and designs. In all cases the rights of holders under the legislation of a State were conserved.

The Patents, Trade Marks and Designs Act, 1914-15, empowers the Minister to suspend the registration of any patent or trade-mark, the proprietor whereof is a subject of a State at war with the King; a large number of such registrations have been suspended in favour of the Minister for Trade and Customs, and other persons approved by the Attorney-General of the Commonwealth.

#### LEGAL PROFESSION.

The legal profession in New South Wales is controlled by regulations of the Supreme Court, which prescribe the conditions of entry to the profession, regulate studentships at law and specify the legal examinations which must be passed prior to admission to practice. Separate boards have been established to govern the admission of barristers and solicitors.

Any solicitor duly admitted to practice has the right of audience in all courts of New South Wales, but the Supreme Court may suspend or remove from the roll any solicitor for proven misconduct or malpractice. Barristers have, in general, no legal right to fees for their services in court, but scales of charges for certain services rendered by solicitors are prescribed by regulation and costs of suits are in certain instances taxed off by an officer of the Supreme Court.

The following table shows the number of members of the legal profession in practice at intervals since 1911, and illustrates the increase in numbers in recent years :—

End of Year.	Barristers.	Solicitors.		
		Sydney.	Country.	Total.
1911	156	603	411	1,014
1918	169	629	429	1,058
1920	174	666	423	1,069
1922	184	717	439	1,156

The number of barristers at the end of 1922 included 24 King's Counsel; at the same date there were in addition to the 1,156 solicitors practising 64 certificated conveyancers.

Barristers are organised under the Council of the Bar of New South Wales, and solicitors under the Incorporated Law Institute of New South Wales, There is also a Society of Notaries.

#### JURY SYSTEM.

The jury system was first introduced into New South Wales in 1824, but was not converted to its present form until 1839.

All crimes and misdemeanours prosecuted by indictment in the Supreme Court or Courts of Quarter Sessions must be tried before a jury of twelve persons, who find as to the facts of the case, the punishment being determined by the judge. Most civil cases may be tried before a special jury of four persons, or a jury of twelve persons, upon application and with the consent of the court. The jury in such cases determines questions of fact and assesses damages. The procedure in relation to juries is governed principally by the Juries Act, 1912, but other Acts regulate special cases.

Persons liable to service on juries include, with certain exceptions, any person above the age of 21 years residing in New South Wales, and

having a clear yearly income of £30 or more from real and personal estate, or a real and personal estate of the value of £300 or more. The principal exceptions are foreign subjects, who have not resided in New South Wales for at least seven years, and certain persons attainted of treason or felony. Persons specially exempt include judges, members of parliament, certain public officers, clergymen, barristers, solicitors, magistrates, police officers, doctors, chemists, schoolmasters, certain employees of banks, incapacitated persons, and persons above the age of 60 years who claim exemption.

A jurors' list is compiled annually in October for each Petty Sessions District by the senior police officer. This list is made available for public inspection, and revised in December before a magistrate. Lists of persons qualified and liable to serve on special juries are also prepared. These include persons of prescribed avocations. The jurors summoned to hear an issue are decided by lot. In criminal cases accused persons or their prosecutors each have the right to challenge eight jurors, or twenty in capital cases, without assigning reasons. In civil cases twice the number of jurors required are summoned, and one-fourth of the number is struck off by each party to the case.

In criminal cases the verdict of the jury must be unanimous. Where agreement is not reached within twelve hours, the jury may be discharged, and the accused tried again before another jury. In civil cases the verdict of three-fourths of the jury may be accepted after six hours deliberation, but failing agreement within twelve hours, the jury is discharged and a new trial held.

#### CRIME.

The particulars already published as to the number of cases or persons dealt with by the various courts are not a correct guide to the amount of crime committed in the community, inasmuch as they do not include undetected offences, nor cases in which criminals are not brought to justice. The following statement shows the number of each of the more serious offences recorded in the *Police Gazette*, known by the police to have been committed in New South Wales during each of the years shown. Such particulars first became available in 1914 with which year the figures of the last four years are compared.

Offence.	1914.	1919.	1920.	1921.	1922.
Murder ... ..	23	37	35	27	16
Infanticide and Bodies of Infants Found...	13	8	6	5	10
Manslaughter ... ..	23	23	20	16	25
Attempted Murder ... ..	27	24	14	6	13
Rape and Assaults on Females ... ..	106	87	115	102	90
Unnatural offences .. ...	23	21	49	39	30
Arson (Attempt and Supposed) ... ..	43	24	31	19	45
Robberies, Garrotting, Assault and Robbery ... ..	164	126	166	162	151
Stealing from the Person ... ..	123	224	213	210	142
Assaults ... ..	198	193	171	160	178
Bigamy ... ..	13	22	24	34	21
Abduction ... ..	2	9	14	5	9
Children Found Abandoned ... ..	19	25	26	23	12
Forged Banks Notes and Spurious Coins ..	64	16	13	14	4
Fraud, Stealing from Premises, and Uttering ... ..	1,172	2,467	2,721	3,035	2,829
Embezzlement ... ..	89	66	94	89	126
Burglaries ... ..	809	1,249	1,516	1,228	1,131
Other Thefts of Jewellery, etc. ... ..	2,385	1,853	2,085	2,096	2,274
Deserted Wives and Children ... ..	1,656	912	1,014	1,086	1,048

As compared with 1914, sustained increases in the number of more serious crimes committed are shown only in the cases of burglaries; stealing, fraud, &c.; unnatural offences and bigamy.

In proportion to the population the taking or attempting to take life, assaults, and offences against females have decreased,

The figures in the above table are not comparable with the statistics of persons charged in the courts, because (1) culprits are sometimes brought to justice in a year subsequent to that in which the crime was committed; (2) the charges on which accused persons are convicted are not always identical with the nature of the crime as first classified by the police; (3) the statistics of cases in higher courts relate only to the principle charge preferred against each individual.

#### *Habitual Criminals and Preventive Detention.*

The Habitual Criminals Act, 1905, empowers a judge to declare as an habitual criminal any person convicted for the third or, in some cases, the fourth time, of certain criminal offences, as specified in the Act. The definite sentence imposed for the last conviction is first served, and the offender is then detained for an indefinite term, until he is deemed fit for freedom.

This system of treatment acts as a deterrent to the existence of professional criminals, and moreover confers an incalculable benefit on society by removing the force of criminal example. The benefits accruing from the system of indeterminate sentences, as initiated in New South Wales, have led to its adoption in other communities.

No persons were declared habitual criminals during 1921, but a total of 83 men and 1 woman have been so declared since the inception of the Act. Of this number, 47 men and 1 woman were released on probation, 5 being recommitted to gaol, 5 died, 7 were released on medical grounds, 3 were removed to the Hospital for Criminal Insane, and in 7 cases the declaration of an habitual criminal was remitted. At the end of 1921 there were under detention 9 men who had not yet completed the definite period, and 17 men who had passed into the indeterminate stage.

On the completion of the definite term under the ordinary prison regulations, the habitual criminal passes to the indeterminate stage, which is divided into three grades—intermediate, higher, and special; a minimum period of 4 years and 8 months must be spent in the lower grades before the prisoner can gain admission to the special grade, wherein cases may be brought under consideration with a view to release. At the end of 1921 8 prisoners were in the intermediate grade, and 9 were in the higher grade. These had amounts of earnings ranging from £3 to £184 to their credit.

An important proviso of the Habitual Criminals Act prescribes that while under detention as an habitual criminal every prisoner must work at some useful trade, and receive at least one-half of the proceeds of his work. As the majority of these persons have not been trained in any branch of skilled labour, facilities are afforded them, while serving the definite term, to acquire training in some remunerative employment.

#### *First Offenders.*

Special provision is made by the Crimes Act, 1900, for lenience towards any person convicted of a minor offence and sentenced to penal servitude or imprisonment therefor, provided such person has not been convicted previously of an indictable offence. The term "minor offence" includes, in

this connection, all offences punishable summarily, and any other offence to which the court applies the provisions of the Act. In such cases sentence is pronounced in the ordinary way, and execution thereof suspended upon the offender entering into recognisance to be of good behaviour for a fixed period of at least twelve months. Such persons are required to undergo an examination to facilitate future identification, and to report quarterly to the police. They may be arrested and committed to prison for the term of sentence imposed, for any breach of the conditions of their release during the period of probation.

Special provision was made in 1918 for observing privacy in hearing the cases of female first offenders.

The following table shows the particulars available concerning the treatment of first offenders in the last five years (cases of children being excluded):—

Year.	First Offenders dealt with by Higher Courts.			First Offenders Released on Probation by Magistrates Courts.	Total First Offenders Released on Probation.
	Released on Probation.	Committed to Prison.*	Total.		
1917	84	244	328	219	303
1918	120	247	367	269	389
1919	151	303	454	282	433
1920	217	418	635	241	458
1921	246	440	686	395	641

\* Persons not previously imprisoned, including first offenders imprisoned for a second offence.

#### *Fugitive Offenders and Extradition.*

By the Service and Execution of Process Act (Federal), civil process commenced in any State of the Commonwealth may be served in any other, and judgment obtained in any State may be enforced in any other. In criminal proceedings, warrants issued in one State and endorsed in another may be duly executed in that State and the fugitive surrendered.

Special arrangements governing these matters as between different parts of the British Empire are made by the Fugitive Offenders' Act, 1881 (Imperial). Subject to local inquiry and committal, any person charged with an offence punishable by imprisonment for twelve months or more may be arrested under a warrant locally endorsed, or under a provisional warrant in cases of suspicion, and extradited.

Extradition to foreign countries is governed by Imperial Acts, or local Acts of special sanction, under treaties concluded with the countries concerned. But such treaties may be entered into only by the Imperial Government and these are usually made applicable to the whole Empire. Various acts are in force. As regards New South Wales, application for the surrender of a foreign criminal is made to the Governor-General by the foreign consul or government concerned. No person, however, may be surrendered without due inquiry into the charge laid against him, and when surrendered he must not be tried for any other offence. Persons charged with political offences only may not be extradited. Application to foreign countries for surrender of a criminal to New South Wales are usually made by the Attorney-General.

The number of fugitive offenders arrested in New South Wales and remanded to other States or countries during 1921 was 28, and the number arrested in other States or countries and returned to New South Wales was 17.

*Capital Punishment.*

The following table shows the total number of death sentences pronounced and sentences of death recorded; also executions during the years 1915-20 :—

Year.	Death Sentences Pronounced and Sentences of Death Recorded.	Executions.	Year.	Death Sentences Pronounced and Sentences of Death Recorded.	Executions.
1916	5	2	1919	3	...
1917	8	2	1920	14	...
1918	4	...	1921	8	...

At the close of 1921, there were in gaol 57 persons serving life sentences, and one against whom sentence of death was recorded.

## POLICE.

The police force of New South Wales is now organised under the Police Regulation Act, 1899, which provides for the appointment of an Inspector-General of Police, who, under direction of the Colonial Secretary, is charged with the superintendence of police. The Governor may also appoint superintendents and inspectors of police as subordinates of the Inspector-General. Sergeants and constables are appointed as required by the Inspector-General, but such appointments may be disallowed by the Governor.

No person may be appointed constable unless he is of sound constitution, able-bodied, under the age of 30 years, of good character, and able to read and write. Any person who has been convicted of a felony, is in other employment, or keeps a house for the sale of liquor, is incapable of acting as an officer of police. A high physical standard is required of recruits.

Members of the force must take an oath of faithful and impartial service, and may be punished by fine in Court of Petty Sessions for failure or refusal of duty. They remain in office until the age of 60 years (or 65 with special permission), unless previously discharged, but may resign previously on giving three months' notice.

The powers of police officers rest on the common law, with certain express additions made thereto by statute.

The State is distributed into 88 police districts, which are subdivided into 530 patrol districts, containing, at the end of 1921, 647 police stations and a police force numbering 2,776. The distribution of this force in 1921 was as follows :—

Classification.	Inspector Gen. and Superin- tendents.	In- spectors.	Ser- geants.	Constables.		Track- ers.	Total.
				Male.	Female.		
Police—General ... ..	14	59	531	1,911	8*	34	2,557
Detective ... ..	1	2	22	21	...	...	46
Water ... ..	...	1	11	42	...	...	54
Traffic ... ..	1	1	7	110	...	...	119
Total ... ..	16	63	571	2,084	8*	34	2,776

\*Including 4 Searchers and 4 Special Constables.

The following statement shows for various years since 1896 the strength of the police establishment (exclusive of trackers) in relation to the population and the number of arrests effected. In addition, the police proceeded by summons in a great many cases, and performed a wide range of miscellaneous duties for other departments, which were estimated in 1921 to occupy approximately one-fifth of their time.

Year.	Number of Police.*	Inhabitants to each Policeman.	Number of Arrests Effected.	Year.	Number of Police.*	Inhabitants to each Policeman.	Number of Arrests Effected.
1896	1,874	682	36,642	1915	2,613	725	50,901
1901	2,172	635	38,092	1916	2,587	729	49,107
1906	2,342	640	46,887	1917	2,557	751	43,574
1911	2,487	684	50,606	1918	2,480	791	43,711
1912	2,554	700	57,886	1919	2,569	794	45,356
1913	2,582	715	58,587	1920	2,634	794	56,354
1914	2,627	716	60,039	1921	2,734	779	58,824

\* Exclusive of Trackers.

Since 1901 the police force has grown at a rather slower rate than the population.

Before 1916 the number of arrests for drunkenness constituted more than half of the total of arrests, but in that year six o'clock closing of hotels was introduced, and a marked diminution has occurred in the number of cases of drunkenness dealt with by the police. During the war period military offenders were dealt with by military police, and the marked decline in the number of arrests effected by civil police in those years is attributable partly to this cause, partly to the absence of a number of civil police on active service, and partly to the preoccupation of the remainder with special war duties. The numbers of arrests for offences other than drunkenness were approximately 21,000 in 1911; 26,000 in 1914; 22,000 in 1917 and 30,000 in 1921.

#### *Rates of Pay and Pensions.*

The salaries paid to the police are as follow:—Inspector-General £1,500; superintendents, £533 to £633 per annum; inspectors, £408 to £458 per annum; sergeants, 18s. 1d. to 20s. 1d. per day; constables, 14s. 7d. to 17s. 7d. per day.

In addition officers not provided with quarters receive lodging allowances as follow:—Inspector-General £178; Superintendents, £110 per annum; Inspectors, £80 per annum. Other ranks—married men, 2s. 6d. per day; single men, 1s. 6d. per day. A clothing allowance of £20 per annum is made to plain-clothes police in lieu of uniform.

A deduction of 4 per cent. is made on account of contributions to a Superannuation Fund. Pension and gratuity rights are as follow:—To police appointed before 1st February, 1907, with less than 15 years' service, a gratuity not exceeding one month's pay is payable for each year of service, and a further gratuity of a month's pay for each year of service after the tenth year; to officers with 15 years' and less than 20 years' service, a pension equal to half-pay, less 3 per cent., is payable; from 20 years' and less than 25 years' service, a pension equal to two-thirds, less 3 per cent.; from 25 years' and less than 30 years' service, a pension equal to three-quarters less 3 per cent.; and from 30 years and upwards, a pension equal to full pay, less 3 per cent. To officers appointed after 31st January, 1907, with less than 20 years' service, a gratuity not exceeding one month's pay for each year of service is payable; to officers with 20 years' service and upwards, a retiring allowance not exceeding one-fortieth of salary for each complete year of service, less 3 per cent., provided that such allowance shall not exceed three-quarters of salary, less 3 per cent.

#### REGULATION OF TRAFFIC.

In the metropolitan district the Traffic Police inspect public vehicles, test taximeters, regulate and control the use of motor vehicles upon public streets, besides exercising a general control over all street traffic. The number of traffic accidents reported during 1921 was 2,877, a decrease of 190, attributed partly to the change of rule which now requires pedestrians to keep to the left.

During the year also 84 persons were killed and 1,706 injured in street accidents in New South Wales. In the metropolitan district 1,116 persons were taken to hospital by the police.

In addition there were 158 prosecutions for cruelty to animals, 136 for working horses in an unfit condition, 114 for driving past stationary trams, and 384 in connection with motor lights. Of 384 horses inspected 346 were found unfit for use.

As regards the services of the police in cases of accident, it is of interest to note that of the total police force, 675 held First Aid Certificates, and 299 held Life Saving Certificates.

*Traffic Licenses.*

The following table shows licenses granted for vehicles and drivers under the Metropolitan Traffic Act and the Motor Traffic Act during the years 1920 and 1921 :—

License.	1920.	1921.	License.	1920.	1921.
Metropolitan Traffic Act—			Metrop. Traffic Act— <i>ctd.</i>		
Horse Cab ... ..	650	643	Motor-van Driver ...	344	523
Motor Cab ... ..	417	407	Horse-bus Driver ...	21	18
Horse Van ... ..	1,627	1,623	Motor-bus Driver ...	354	441
Motor Van ... ..	250	376			
Horse Omnibus ... ..	12	8	Motor Traffic Act—		
Motor Omnibus ... ..	149	180	Motor Vehicle ... ..	29,100	32,189
Horse-cab Driver ...	755	756	Motor Vehicle Driver ...	47,805	52,538
Motor-cab Driver ...	619	627	Motor Cycle ... ..	10,991	11,291
Horse-van Driver ...	1,874	1,884	Motor Cycle Rider ...	16,059	16,115

The revenue obtained under the Metropolitan Traffic Act was £4,610 in 1920, and £4,834 in 1921 ; under the Motor Traffic Act £47,144 in 1920, and £51,711 in 1921 ; and under the Motor Vehicles (Taxation) Act £117,984 in 1920, and £131,025 in 1921.



## PRISON SERVICES.

A prison may be established by proclamation of the Governor, at any premises prepared and maintained as a prison at the public expense. A Comptroller-General and Deputy Comptroller-General of Prisons are appointed by the Governor for the care of prisons and custody of convicted prisoners. Persons in custody awaiting trial are held by the Comptroller-General for the Sheriff.

All prisons must be visited at least once each week by a magistrate appointed "Visiting Justice," who may enter and inspect, and report to the Chief Secretary upon any matter connected with the gaol as often as he deems necessary. Such justice may hear and determine complaints against prisoners and award as punishment a term of solitary confinement on bread and water. In addition Judges of the Supreme Court may visit prisons and sit as a Court of Gaol Delivery to determine cases of untried prisoners.

At the end of 1921 there were 24 gaols in New South Wales; of these, 5 were principal, 8 minor, and 11 police gaols. Altogether since 1901, when there were 59 gaols, 40 have been closed, and 5 opened. Parramatta gaol was reopened in 1922.

### *Grading of Establishments.*

The prison establishments are graded with a view to the concentration of prison population in institutions large enough to ensure efficiency of supervision with economy of administration, and the maintenance of a strict and disciplinary organisation conducive to the highest ideals of reform.

The State Reformatory for Women at Long Bay is occupied by prisoners of all classes, and the State Penitentiary for Men at Long Bay is used as a place of detention for incapables from the city, and as a centre from which long-sentence prisoners are distributed to the principal country establishments; while at the police gaols and lock-ups are detained only prisoners with sentences of less than fourteen days. The Prisoners' Afforestation Camp, Tuncurry, receives selected prisoners (first offenders) after portion of their sentence has been served; and at the Emu Plains Prison Farm, young industrious prisoners, with suitable qualifications are treated on somewhat similar lines.

### *Classification of Prisoners.*

In all the large establishments an inter-classification system is operative, which assures the segregation of the inmates in various classes as to age and conduct. For several years the principle of restricted association has been in operation, and has yielded results which demonstrate its success. Under present conditions association while at work, at exercise, and at religious instruction, is subject to the closest supervision. Cells are lighted, and literature is provided from the prison libraries.

## PRISON POPULATION.

The number of prisoners in gaol, exclusive of inebriates, at the close of each year, and the number of gaol entries during the last five years, are shown below :—

Year.	Under Sentence.		Awaiting Trial.		Total.			Number of Gaol Entries during Year.
	Males.	Females.	Males.	Females.	Males.	Females.	Total.	
1917	1,154	138	81	4	1,235	142	1,377	8,169
1918	854	105	59	7	913	112	1,025	7,804
1919	835	60	85	6	920	66	986	7,373
1920	1,056	72	111	9	1,167	81	1,248	8,784
1921	1,182	91	90	6	1,272	97	1,369	8,817

Of the prisoners in gaol under sentence at the end of 1921, 1,174 were serving sentences of penal servitude, or of hard labour, and 99 sentences of imprisonment only, of the latter the terms of sentence were unspecified. Other confinees included 17 habitual criminals, and 57 persons serving life sentences.

The number of gaol entries shown in the table, includes convicted persons, persons awaiting trial, debtors, naval and military offenders, and persons on remand, some of whom were received and counted several times.

The average daily number of prisoners in gaols decreased very markedly between 1892 and 1911. In the former year the average daily prison population was 2,551 or 22·3 per 10,000 of population as compared with 1,295 or 7·8 per 10,000 of population in 1911. A rapid growth of prison population took place between 1911, and 1915 when, owing probably to circumstances brought about by the war, a further marked decline occurred, and in 1919 the average daily number of prisoners confined in gaols was the lowest since records were commenced (1887). Since 1919 the numbers have increased further. Records for the ten years 1912–1921, are as shown below :—

Year.	Average Daily Number of Prisoners Confined.		Year.	Average Daily Number of Prisoners Confined.	
	Number.	Per 10,000 of Population.		Number.	Per 10,000 of Population.
1912	1,371	7·86	1917	1,429	7·50
1913	1,509	8·29	1918	1,283	6·60
1914	1,675	8·96	1919	1,058	5·29
1915	1,725	9·12	1920	1,192	5·76
1916	1,081	8·88	1921	1,347	6·39

The average daily number of prisoners in gaols varies over lengthy periods under the influence of several variable factors, chiefly the number of offences for which imprisonment may be ordered and the severity of sentences imposed. There has, in recent years, been a growing tendency to lenient treatment. The average number of confinees in any particular year does not necessarily reflect the amount of crime committed in that year, but this is shown by the following statement of prisoners under sentence received into gaols during various years since 1901 :—

Year.	Convicted in Higher Courts.			Convicted in Courts of Petty Sessions.			Other persons sentenced to Prison. *	Grand Total.
	Not previously in Prison.	Previously in Prison.	Total.	Sentenced to Prison.	Imprisoned in default of paying Fine.	Total.		
1901	270	382	652	2,804	8,182	10,986	202	11,840
1906	287	325	612	1,957	6,853	8,810	149	9,571
1911	248	237	485	1,728	4,959	6,687	261	7,433
1912	238	261	499	2,357	5,844	8,201	259	8,959
1913	298	349	647	2,372	6,016	8,388	281	9,316
1914	243	412	655	2,426	6,299	8,725	416	9,796
1919	303	279	582	1,487	3,076	4,563	264	5,409
1920	390	418	808	1,630	3,724	5,354	40	6,202
1921	422	440	862	1,270	4,441	5,711	41	6,614

\* Includes persons imprisoned as debtors, as offenders against Federal laws, as naval and military offenders, and as a result of civil processes.

This table provides a comparison of recent years with those more remote, and of the pre-war and post-war periods. General features of the figures are (1) that usually more than half the crimes for which convictions are obtained in the higher courts (*i.e.* the more serious crimes) are committed by persons who have already been in prison, (2) approximately two-thirds of the prisoners are committed to gaol in default of paying fines imposed in Courts of Petty Sessions. Since 1901 the total number of persons committed to prison under sentence has decreased heavily, especially when the growth of population is considered, the relative proportions per 1,000 of population being in 1901, 8·6; 1911, 4·5; 1921, 3·1. This decrease is due mainly to a diminution in imprisonment for minor offences dealt with by Courts of Petty Sessions, where the decrease in the number of persons committed to prison without the option of paying a fine is particularly noticeable. Between 1911 and 1914 the number of persons imprisoned for serious crime was increasing, but was relatively less than in former years. The marked numerical increase since the war has not raised the proportion relatively to the population.

#### *Imprisonment—Composition by Fine.*

Under the Justices Act any persons committed to prison in default of payment of a fine may pay a portion of the fine under prison rules and be

relieved of a proportionate part of the period of imprisonment. The extent to which this provision has been availed of since 1902, when it first became operative is shown below :—

	1902.	1911.	1919.	1920.	1921.
Persons committed to gaol in default of payment of fines ... ..	8,062	4,959	3,076	3,724	4,102
Prisoners subsequently released after paying portion of fines ... ..	1,008	1,480	801	781	848
Days prisoners would have served if portion of fines had not been paid ...	30,768	41,104	21,791	27,017	32,323
Days remitted by part-payment of fines ...	20,179	30,120	12,543	16,602	18,464
Amount received at gaol as part-payment of fines ... .. £	2,198	3,153	2,484	2,721	3,157

The proportion of persons who took advantage of the provision has latterly been rather more than 20 per cent. of the total. In 1902 and 1911, the amount received at gaols per day's imprisonment remitted was approximately 2s., latterly it has been about 3s. 4d.

#### *Prisoners Released on License.*

Persons eligible for remission of sentence for good conduct and industry may be released on license to be of good behaviour.

Licenses operate for the unexpired portion of the sentence and sureties are required. The licensee is required to report periodically, and a breach of the conditions of release may be punished by the cancellation of the license, and recommittal to gaol for the balance of the sentence. During 1921, licenses were granted under Prisons Regulation No. 75, to 322 men and 8 women, and under the Crimes Act to 103 men and 8 women.

#### *Industrial Activity in Prison Establishments.*

Ability to perform useful and remunerative labour is recognised as of equal importance with good conduct in demonstrating fitness for freedom; and, to encourage some degree of skill, employment at industries calculated to inspire interest, and subsequently to prove remunerative, is provided under the supervision of competent instructors. The principal activities being farming, gardening, bread-baking and minor manufactures.

In 1921 the value of prisoners' labour amounted to £58,371, viz. :—manufactures for gaols, £15,714; and for other Government Departments, £14,195; in buildings, £6,730; domestic employment, £21,674; and other employment, £58. Prisoners' labour supplied almost entirely the needs of the Department in forage and vegetables in 1921.

#### *Sickness and Mortality in Gaols.*

Visiting surgeons are attached to the various important establishments and modern systems of sanitation and hygiene are in vogue. Among the persons received into the institutions are included some whose physical condition is deplorable, persons in the last stages of disease, and aged and infirm persons, for whom a hospital or asylum is the befitting destination. Prisoners suffering from tuberculosis receive special treatment.

The medical statistics of prisons show that, with an average daily number of 1,347 inmates during 1921, the total number of cases of sickness treated in hospital was 339; 9 prisoners died, and 20 were released on medical grounds. The death rate per 1,000 of the average number of inmates was 6.60.

#### *Lock Hospitals.*

Under the Prisoners Detention Act, 1908, prisoners found to be suffering from certain contagious diseases may be detained in Lock Hospitals attached to the gaols. In cases of imprisonment without option of fine, a stipendiary magistrate may cause the prisoner to be detained until certified by the medical officer as free from disease even after the definite sentence is served; but in the case of imprisonment in lieu of payment of a fine, the Act did not provide for detention beyond the specified term of imprisonment. In 1918, however, an Act was passed to remedy this defect, and all such prisoners may now be treated in the Lock Hospitals until free from contagion.

During 1921 orders for detention in the Lock Hospitals were obtained in the cases of 110 men and 31 women. Prisoners were detained for curative treatment during 1921 for periods ranging up to seven months after the expiration of their original sentence.

#### SPECIAL PRISON TREATMENT.

Upon the recommendation of the judge before whom they have been tried, prisoners convicted of a misdemeanour under sentence of imprisonment without hard labour may be placed in a special class and treated similarly to those confined under civil process. Such prisoners are segregated and are allowed privileges regarding food, clothing, etc.

#### *First Offenders.*

The records of 862 persons convicted at the higher courts during 1921 show that 422 had not been imprisoned previously.

At Goulburn Gaol special reformatory treatment is provided for first offenders through the provision of useful employment, educational facilities, physical drill, and strict classification in order to prevent association with prisoners of vicious tendencies. That this plan is an important factor in the deterrent influence of the prison system, is evinced by the small proportion of re-convictions of prisoners passing through the treatment.

#### *Youthful Offenders.*

In New South Wales a strict line of demarcation is drawn between offenders over and under the age of 25 years. Offenders under age 25 are classified in age-groups; also according to length of sentence over or under 12 months, and divisional treatment is accorded. Special disciplinary, scholastic, religious, physical training, and industrial courses are provided, for the last of which facilities in the form of workshops are available. Great discrimination and special care are necessary to prevent such youthful offenders from becoming confirmed criminals.

#### *Maintenance Confinees.*

The Deserted Wives and Children Amending Act, 1913, empowers the Comptroller-General of Prisons to direct a prisoner committed to prison under the Deserted Wives and Children Act, 1901, or the Infant Protection Act,

1904, to perform any specified class of work. An estimate is made of the value of the work performed, and after a deduction for the prisoner's keep, the remainder is applied towards satisfaction of the order for maintenance under the Deserted Wives and Children Act 1901, or for maintenance or expenses under the Infant Protection Act, 1904.

During 1920 the number of maintenance confinees received into gaol was 344, as compared with 270 in the previous year.

#### *Women in Prisons.*

In August, 1909, the State Reformatory for Women was opened at Long Bay, and to this central institution are sent all prisoners from the metropolitan district, and all long-sentence prisoners from extra-metropolitan districts. At Long Bay an exhaustive system of classification is in force, accommodation being provided by means of 290 separate rooms.

During 1921 1,315 women were received in Long Bay, the number remaining at end of the year being 85.

The industrial activity of the institution resulted in an output of manufactures, which, with the work of gardening and domestic services, was valued at £3,082. During 1921 the daily average at the Long Bay State Reformatory for Women was 104.

In 1921, at all gaols of New South Wales, 1,430 female prisoners were received under sentence, the daily average number, including untried prisoners, being 111.

Approximately 77 per cent. of the women received at all gaols were committed on sentences of one month and less, and consequently presented little opportunity for the application of reformatory measures.

#### *The Treatment of Inebriates.*

The Inebriates Act was designed to provide treatment for two classes of inebriates—those who have been convicted of an offence, and those who have not in this way come under the cognisance of the law.

For the care and treatment of the latter class, the Act authorises the establishment of State institutions under the control of the Inspector-General of Insane. Judges, police magistrates, and the Master-in-Lunacy may order that an inebriate be bound over to abstain, or that he be placed in a State or licensed institution, or under the care of an attendant controlled by the Master-in-Lunacy, or of a guardian, for a period not exceeding twelve months. Provision is made also to enable an inebriate to enter voluntarily into recognisances to abstain.

An inebriate convicted of an offence of which drunkenness is a factor, or, in certain cases, a contributing cause, may be required to enter into recognisances for a period of not less than twelve months, during which he must report periodically to the police; or he may be placed in a State institution under the direction of the Comptroller-General of Prisons.

Special provision has been made at the State Penitentiary for men, and at the State Reformatory for women, detained under the Inebriates Act, who have been convicted previously for other offences; since March, 1915, those of the non-criminal class have been treated at a separate establishment, the Shaftesbury Inebriate Institution.

In 1917 arrangements were made for the admission of voluntary paying patients to the Shaftesbury Institution; these patients may, under certain conditions, leave the institution daily to follow their usual occupation. During 1921, 19 men and 8 women were admitted as voluntary patients, and 2 men and 3 women were remaining on 31st December.

*State Inebriate Institutions.*

The power of detaining inebriates in State Institutions was first exercised in 1907, and the majority of admissions have been of chronic offenders over 40 years of age, who for many years prior to admission had served frequent sentences under the repeated short sentence system, and who in consequence had drifted into a condition from which reformation seemed almost hopeless. In view of this fact the results attained by the operation of the Acts may be considered encouraging.

During the period dating from the first reception in August, 1907, to 31st December, 1921, the total number of original receptions amounted to 1,063—471 men and 592 women; 1,364 licenses for release were issued—518 to men, and 846 to women; 177 issued to men, and 352 to women, have been cancelled, and the licensees recommitted to institutions.

At the end of the year 1920 there were, exclusive of voluntary patients, 55 persons in custody at the inebriate institutions; 155 were received during 1921, 2 were discharged, 116 were released on license, 1 absconded while on parole, leaving 81 at the end of the year 1921.

Of the 116 persons released on license during 1921 from the institutions, 47 obtained employment, 20 were admitted to homes, 1 to hospital, and 48 were released to care of friends.

The total expenditure on inebriate institutions during the year amounted to £4,173.

AGES AND RELIGIONS OF PERSONS IN GAOL.

The number of persons serving sentences in gaols at the end of 1921 were distributed as follows in groups of ages and religions:—

Religion.	Number in each Age Group.			Total.		
	15-24.	25-64.	65 and over.	Males.	Females.	Total.
Church of England...	119	439	6	528	36	564
Roman Catholic ...	126	412	8	497	49	546
Methodist ...	9	21	...	27	3	30
Presbyterian ...	20	66	...	83	3	86
Other Christian ...	3	14	1	18	...	18
Non-Christian ...	2	15	...	17	...	17
No religion ...	2	9	1	12	...	12
Total ...	281	976	16	1,192	91	1,273

Of the persons imprisoned one was over eighty years of age and four between the ages of seventy-five and eighty years.

## COST OF ADMINISTRATION OF JUSTICE.

The following table shows the amount expended by the State in the administration of justice, and in the protection of property and punishment of criminals, in New South Wales during the last five years; also the amount of fines and fees, and net returns from prisoners' labour paid into the Consolidated Revenue :—

Expenditure and Revenue.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
<b>Expenditure—</b>	£	£	£	£	£
<b>Law Administration—</b>					
Salaries, Pensions, &c. of Judges and Officers ... ..	52,935	52,368	53,876	59,106	60,407
Department of Attorney-General and of Justice* ... ..	221,609	225,121	232,176	288,742	342,703
	274,544	277,489	286,046	347,848	403,110
<b>Police—</b>					
Administration ... ..	679,489	667,104	928,761	1,062,101	1,106,102
Rewards ... ..	900	1,127	1,995	100	.....
Other† ... ..	63,000	72,000	77,000	80,000	91,000
	743,389	740,231	1,007,756	1,142,201	1,197,102
Prisons ... ..	90,570	87,875	92,781	113,882	120,317
<b>Total Expenditure ... ..</b>	<b>1,108,503</b>	<b>1,105,595</b>	<b>1,386,583</b>	<b>1,603,931</b>	<b>1,720,529</b>
<b>Revenue—</b>					
Fees ... ..	66,508	69,174	81,318	100,188	111,720
Fines and Forfeitures ... ..	31,055	35,280	38,785	45,303	45,723
Value of Prisoners' Labour‡ ... ..	705	499	410	660	662
<b>Total Revenue ... ..</b>	<b>98,268</b>	<b>104,953</b>	<b>120,513</b>	<b>146,151</b>	<b>158,105</b>
<b>Net Cost ... ..</b>	<b>1,010,235</b>	<b>1,000,642</b>	<b>1,266,070</b>	<b>1,457,780</b>	<b>1,562,424</b>
<b>Per Head of Mean Population—</b>	s. d.	s. d.	s. d.	s. d.	s. d.
Police ... ..	7 9	7 6	9 11	10 11	11 3
Law Administration ... ..	2 10	2 10	2 10	3 4	3 9
Prisons ... ..	0 11	0 11	0 11	1 1	1 2
<b>Net Cost ... ..</b>	<b>10 6</b>	<b>10 2</b>	<b>12 5</b>	<b>13 11</b>	<b>14 8</b>

\* Excluding Public Service Board, Prisons, and Registrar-General's Department, and certain other items of expenditure. † Payments made to the Police Pension Fund under the Police Regulation (Superannuation) Act (No. 28 of 1906). ‡ Exclusive of value of work done for Prisons and other Government Departments.

The expenditure by the Police Department shown above is not absorbed solely by police services proper, since the members of the police force perform extensive administrative services for other Departments of State estimated to exceed in value £200,000 per annum.



## LOCAL GOVERNMENT.

### GROWTH OF LOCAL GOVERNMENT.

THE first step towards Local Government in New South Wales may be said to have been taken in 1840, when the Parish Roads Act was passed, authorising proprietors of lands adjacent to or within 3 miles of parish roads to elect trustees, who were empowered to levy rates, establish tolls, and borrow money for making or repairing such roads and the bridges thereon.

Two years later, by Act No. 3, passed on the 20th July, 1842, the town of Sydney was declared to be a city, and its inhabitants were constituted a body corporate and politic. This was the first area to be incorporated for Local Government purposes. The incorporation of the town of Melbourne followed on 12th August in the same year.

Recognising that it was "expedient that provision be made for the Local Government of the different parts of the said colony" (New South Wales), an Act\* was passed by the Imperial Government on 30th July, 1842, making it lawful for the Governor, by Letters Patent, to form districts and establish district councils, subject to certain provisions.

The councils were to be elective; the number of councillors to be elected was not more than nine if the population was less than 7,000; not more than twelve if it was between 7,000 and 10,000; not more than fifteen if between 10,000 and 20,000; and not more than twenty-one if it exceeded 20,000. A councillor was required to be 21 years of age, and the owner of land valued at £2,000, or of a yearly rental value of £200. An elector had to be possessed of landed property valued at £200, or the occupier of a dwelling of an annual rental value of £20.

Councils could make orders and by-laws for making, maintaining, and improving any new or existing road, street, or bridge; for building, repairing, and furnishing public buildings; for the purchase, sale, or management of real and personal property; for providing the means of defraying certain expenses of, or connected with, the administration of justice and police within the district; for establishing and supporting schools; for raising and collecting tolls, rates, and assessments; for imposing reasonable penalties upon persons who, having been elected, refused to take the oaths of office; and for certain other purposes. They were required to defray one-half of the cost of the police establishments of the colony (exclusive of the convict establishment) out of their general revenue.

The scheme met with very little success. From the outset it was recognised that councils would have to bear a heavy burden in defraying half the cost of police administration, and rural districts generally showed great reluctance to be incorporated.

The first districts to be incorporated were Campbelltown, Appin, Camden, Narellan, and Picton, which were established as a district council in 1843; in the same year, however, Campbelltown and Appin were constituted a separate district. In 1844 the number of country district councils had increased to eight only, and these, in conjunction with the Municipal Council of Sydney and the road trusts, subsequently established, constituted the whole of the local government system prior to 1858.

\*A more important feature of the Act was its provision for the constitution of a Legislative Council of thirty-six members, of whom twenty-four were elective.

*Road Trusts.*

Effective provision for the construction and maintenance of the public roads was of vital importance at this time. Administration by local authorities seemed to promise the best results, and from time to time Acts were passed authorising the Governor to appoint Commissioners to maintain roads specified in the Acts. The Commissioners had power to erect toll gates and collect tolls; also to enter adjoining lands and to dig and carry away, without payment, any material required for road-making.

The first Act, authorising the appointment of Commissioners for the Old and the New South Head roads, was passed in 1848. Although this Act was repealed by the Cumberland Roads Act, 1849, the appointment was continued and the Trust remained in existence until 1896, being the last to cease operations after the abolition of tolls on the 1st May, 1890.

*The Municipalities Act of 1858.*

This was the first important enactment relating to general municipal government.

It repealed the provisions of the Imperial Act, passed in 1842, relating to district councils, and provided that the Governor, with the advice of the Executive Council, upon receipt of a petition signed by not fewer than fifty resident householders, and in the absence of a more numerous signed counter petition, might proclaim any city, town, hamlet, or rural district a municipality. A municipality could be divided into two or three wards, according to whether its population was less or more than 1,000. Six councillors could be elected if the population was below 1,000 and nine if it exceeded that number. Every ratepayer could vote and was eligible for election as councillor unless disqualified by the Act. Councillors were elected for three years, but one-third of their number—those who had the smallest number of votes—retired annually.

The Council had the care and management of roads, public streets, bridges, wharves, etc., and was authorised to adopt means for the establishment and management of public cemeteries, water supply, lighting, sewerage, hospitals, asylums, public libraries, museums, botanical gardens, or other public places of recreation: it could make by-laws for the suppression of nuisances; for regulating and licensing public carriers and others; for regulating the killing of cattle and sale of meat; for commonage rights, etc.

The general rate was limited to 1s. in the £ on the fair average annual value of ratable property, but special rates could be levied for water supply, sewerage and lighting, and the council could borrow money not exceeding its estimated revenue for three years. Endowment by the Government was provided as follows:—In each of the first five years an amount equal to the amount raised by rates; in the second five years one-half; and in the third five years one-fourth of the amount so raised; the endowment then ceased.

Under the authority of this Act, thirty-five municipalities were incorporated, and with few exceptions they are still in existence, although many of the boundaries have been altered. At the close of 1860, the total area incorporated was 409 square miles only.

*Municipalities Act of 1867.*

The Act of 1858 was repealed by the Municipalities Act of 1867. The existing municipalities were continued as boroughs, and all areas incorporated in the future were to be classified either as boroughs or municipal districts.

A borough might consist of any city or town, any suburb of the metropolis, or any country district with a population exceeding 1,000 persons, and an area not less than 9 square miles. A municipal district might include any area not containing a borough, with a population not less than 500 and an area not more than 50 square miles, and it was left optional for any district to become incorporated.

The powers of the councils were extended by authorising them to establish pounds; to license and impose fixed charges upon vehicles plying for hire; to compel the extirpation of noxious weeds; to establish free libraries, free infant schools, and public baths.

The limit of the general rate remained at 1s., but special rates could be levied for special services provided that the total rating did not exceed 2s. in the £ on the assessed value, which, for all purposes, was fixed at nine-tenths of the fair average rental value.

Power was given to borrow money up to the estimated revenue for five years, instead of three years, and the Government endowment was continued.

In 1884 and 1888 Acts were passed empowering councils to contract special loans for the erection of gasworks and town halls respectively, and in 1893 they were given power to raise money to repay loans.

#### *Municipalities Act, 1897.*

The Municipalities Act of 1897 consolidated the Act of 1867, and Amending Acts, but did not alter their main features. The voluntary principle of incorporation which was retained did not lead to the adoption of a general system of local government, as it was natural that, so long as the central Government continued to construct local works, the persons benefited would not be burdened with the management of their local affairs.

#### *Local Government (Shires) Act.*

The Local Government (Shires) Act, 1905, introduced many new features. It ensured the adoption of local government throughout the populous rural districts of the State, comprising three-fifths of its area; it introduced the system of rating upon the unimproved value of land, and established a system of government supervision, particularly over book-keeping and accounting.

The Act provided for the compulsory division of the State into local government areas, called shires. The city of Sydney and existing municipalities, and the whole of the Western Division, were excepted from its operation. It provided also for the payment of a Government endowment of not less than £150,000 annually, as follows:—First-class shires from nil up to 10s. per £ on the amount of general rates received during the preceding year; second-class, 15s. per £; third-class, 20s.; fourth-class, 25s.; fifth-class, 30s.; and sixth-class, 40s. or more. The councils were authorised to exercise the following powers:—The care, control, construction, fencing, and maintenance of all public places, except those vested in the Railway Commissioners, or other public bodies or trustees, and national works; regulation of traffic; street and road lighting; prevention of bush fires; flood relief and prevention; construction and maintenance of streets, jetties, wharfs, and buildings for the transaction of business; and the administration of the Impounding and Public Watering Places Act. The right was given to acquire other powers, such as the prevention of nuisances, water supply, regulation and licensing of public vehicles and hawkers, management of parks and commons, and the administration of the Public Gates Act and the Native Dog Destruction and Poisoned Bait Act.

Shires were divided into ridings, each having equal representation on the council, which, in the first instance, consisted of six members, including a president, but could be increased later by resolution of the council to nine members. An annual allowance, not exceeding £50, could be granted to the president and reasonable travelling expenses could be paid to councillors. All owners and occupiers of ratable property of annual value not less than £5, over 21 years of age, male and female, unless not naturalised, were entitled to be entered on the electors' roll, any male person enrolled being qualified for nomination as a councillor, and triennial elections were prescribed.

The system of levying rates upon the unimproved value of land was introduced, superseding the practice hitherto prevailing of charging rates on annual rental values. Councils were required to impose a general rate of not less than 1d., nor more than 2d. in the £, unless the minimum rate was more than sufficient to meet the requirements of the shire, in which case a rate of less than 1d. might be levied by permission of the Governor. The ratable value of coal-mines was fixed at 50 per cent. of the gross value of the average annual output for the preceding three years, and of other mining properties at 40 per cent. for the same period. Another important feature of the Act was the provision for suspending the operation of the State land-tax when the council had imposed a rate of 1d. in the £ on the unimproved capital value. Commons, public reserves and parks, cemeteries, public hospitals, benevolent institutions, churches, and other buildings used exclusively for public worship, free public libraries, and unoccupied Crown lands were exempted from taxation.

*Local Government Extension Act, 1906.*

This Act, a very comprehensive measure relating almost entirely to municipalities, and conferring on them the extensive powers which had been granted to shire councils, was passed on 18th December, 1906. It was provided that it should come into operation on a day, within six months of its passing, to be proclaimed by the Governor. The day was not proclaimed, however, as in the meantime a consolidation of the Acts relating to the local government of municipalities and shires had been brought to completion and a Bill, embracing the provisions of this Act also, was introduced and passed through all its stages in the Legislative Assembly on the same date (18th December, 1906), and finally agreed to on 28th December, 1906.

*Local Government Act, 1906.*

The existing enactments relating to the local government of shires and municipalities were consolidated by the Local Government Act, 1906, and were repealed from the date on which it came into operation, namely, 1st January, 1907.

The constitution of existing shires and municipalities was continued, and provision was made for alteration or reconstitution of areas. The powers already conferred on shire councils by the Shires Act were granted to municipal councils and the powers of both bodies were extended considerably. To the primary powers of shire councils were added the duties of preventing the pollution of natural watercourses; of making and forming public roads and controlling and maintaining stormwater channels, etc. They could also be proclaimed as the local authority to administer the Dairies Supervision Act, 1901.

All municipalities not receiving statutory endowment, if found on investigation to be in necessitous circumstances, were entitled to a Government endowment not exceeding 3s. 4d. in the £ on the general rate collected; but

if the revenues were sufficient to meet the reasonable requirements under proper management, no endowment was to be paid. The endowments to shires were the same as had been granted under the Shires Act.

Both shire and municipal councils could levy rates of four kinds, namely, general, special, local, and loan rates. Each was required to levy a general rate of not less than 1d. in the £ on the unimproved value of ratable land, but if this rate proved more than sufficient to meet the requirements of the council, it could be reduced. The general rate could not exceed 2d. in the case of shires, and in the case of municipalities it could not exceed the total estimated revenue yielded by a rate of 2d. in the £ on the unimproved capital value, and 1s. 6d. in the £ on the assessed annual value, taken together, of all ratable land. Having levied the general rate of 1d. on the unimproved value, a council was empowered to impose, either on the improved or on the unimproved value, such additional rate as might be required. Special, local, and loan rates could be imposed on the improved or unimproved value, at the option of the council. The conditions as to ratable value and the franchise of electors were similar to those of the Local Government (Shires) Act.

The borrowing powers of municipalities were increased considerably. They could borrow up to an amount equal to 10 per cent. of the unimproved value of ratable land, and both municipal and shire councils might borrow temporarily in any year an amount not exceeding one-third of the estimated revenue from rates.

#### EXISTING SYSTEM OF LOCAL GOVERNMENT.

Various amending Acts were passed up to the year 1918, and in 1919 a new charter of local government was enacted, extending the powers and functions of local governing bodies into new and important spheres.

The Local Government Act is a voluminous measure of 655 clauses, while the ordinances proclaimed for the purpose of carrying its provisions into effect are even more comprehensive.

The Act is administered by the Minister for Local Government, who is in control of a State Department. The Minister is given considerable control over councils in respect of many matters, including the following:—Alteration and reconstitution of areas; raising temporary loans and loans for special purposes; method of book-keeping and preparation of financial statements; audit of accounts; expenditure; disposal of sewage and closing of wharves. He may also withhold the payment of endowment, main roads grant, and any other moneys if a council neglects to comply with certain provisions of the Act.

Local governing areas are of two kinds, namely, municipalities and shires. Municipalities constituted under previous Acts continue in existence, but a new municipality cannot be constituted unless it contains a population of 3,000, has an average density of population of at least one inhabitant per acre, and the unimproved value of all its ratable land is such that a general rate of 3d. in the £ thereon will yield £3,000 annually. Municipalities may be divided into wards; shires must be divided into ridings. Areas may be altered or reconstituted either by uniting or dividing them, by alteration of boundaries, by conversion of a municipality into a shire or *vice versa*.

Each area is governed by a council. A municipal council must consist of not less than six nor more than fifteen aldermen, and a shire council of not less than six nor more than nine councillors, each riding being represented by an equal number of councillors. Each municipal council elects a mayor, and each shire council a president annually. A council may pay to its

members reasonable allowances towards out-of-pocket expenses and travelling expenses, and may make an allowance to the mayor or president.

Councils are elected triennially. Every adult natural-born or naturalised British subject of either sex is qualified to be an elector provided he or she is either a landowner, a rate-paying lessee, or has been for three months preceding jointly or severally a continuous occupier of ratable land of the yearly value of £5 or upwards. Unless disqualified by the Act, every elector is qualified for a civic office.

The powers of the councils are extremely wide. As stated in the Act, a council may do all things necessary from time to time for public health and convenience. In the case of a shire, special provision is even made for subsidising a resident qualified medical practitioner.

Councils have the care, control, and management of the public roads, the fee-simple of which is vested in them; they may open or close roads and regulate the traffic thereon and in all public places.

They may control and regulate the sanitation, use, and occupation of premises; keeping, removal, and distribution of all depot rubbish; premises for the storage and sale of any article of food; storage, sale, delivery, or preparation of any article of food; restaurants, cafes, etc.; erection of buildings; premises used for public entertainments and amusements; burial and cremation; seamen's boarding-houses; advertisements and advertising structures; and public bathing.

They may provide, maintain, control, and regulate sanitary depots, destructors and plant; infants' milk depots; maternity and infant welfare centres; washhouses and laundries; civil ambulance brigades (and may subsidise them); public places of convenience; disinfecting chambers; lethal chambers for dogs and other animals; grounds for public health, recreation, convenience, etc.; gymnasias; places of public recreation, entertainment, amusement or improvement; public cemeteries; crematories; mortuaries; public markets; abattoirs; and public weighbridges.

In any public reserve under its care a council may provide, control, and manage public and musical entertainments; chairs for hire to the public; public refreshment-rooms; buildings for public entertainments; boatsheds and boats for hire; grandstands, pavilions, etc.

On any land acquired by a council or any public reserve under its care and control the council may provide, control, and manage public baths, dressing pavilions, club and drill rooms, costumes, life-saving appliances, etc.

The council may control, provide, and manage, or may subsidise reading and lending libraries, schools of arts, literary institutes, mechanics institutes, art galleries, and museums.

On its own land it may provide and maintain a town hall and offices, drill halls, night shelters, etc., and may erect and sell on extended terms workers' dwellings, shops, buildings, etc.

It may establish and conduct an employment agency; may provide for the destruction of noxious plants and animals, for the protection of native flora, for the prevention and mitigation of bush fires, and for the protection of life and property from flood.

Provision is also made for town planning, in order to improve the areas by constructing new roads, re-arranging existing roads and parcels of land, demolishing and re-constructing buildings and embellishing the municipalities and shires generally.

Residential districts may be proclaimed, in which no buildings for trades, industries, shops, hoardings, etc., may be erected.

In order to provide for the maintenance, repair, and cleaning of the portion of Parramatta-road passing through the municipalities of Petersham, Leichhardt, and Annandale, a joint committee has been appointed under the ordinances with considerable powers. This is the only body constituted up to the present to deal with roads of a national character within local areas.

In addition to providing and controlling the ordinary services such as water, sewerage, drainage, and lighting, councils may acquire and conduct trading undertakings for the supply of electric and hydraulic power, of ferry or motor-bus services, of stone, clay, sand, or gravel from its pits; of pipes, flagstones, kerbstones, etc., or for the conveyance of goods.

As local authorities, councils administer the Public Health Acts, 1902, Noxious Trades Act, 1902, Cattle Slaughtering and Diseased Animals and Meat Act, 1902, and Public Watering Places Act, 1902. Municipalities are, and shires may be, charged with the administration of the Dairy Supervision Act, 1902.

The servants of the council must include a municipal or shire clerk and an engineer, each duly certificated, and, if required, a health inspector.

The Act provides that each council shall establish separate and distinct funds as follows:—A general fund, a special or local fund in respect of each special or local rate levied, a trading fund in respect of each trading or business undertaking, and a trust fund. Accounts and books must be kept in the manner and form specified; annual statements in prescribed form must be prepared, and aggregate balance-sheets and revenue accounts must be published in a newspaper. The accounts and the office management are subject to Government inspection.

Rates of four kinds may be levied, namely, general, special, local, and loan rates. A general rate of not less than 1d. in the £ must be levied on the unimproved value of ratable land, but if the minimum rate is more than sufficient to meet requirements, the Governor may allow the council to levy a lower rate; other rates may be levied on the unimproved or improved value of ratable land. In municipalities the general rate is limited to a sum ascertained by adding together the calculated yield of 2d. in the £ on the unimproved value, and 1s. 6d. in the £ on the assessed annual value of all ratable land, and the total of all rates (other than water and sewerage local rates) is limited to the total calculated yield of 2d. in the £ on the unimproved capital value, and 2s. in the £ on the assessed annual value; water and sewerage local rates are each limited to the calculated yield of 2s. in the £ on the assessed annual value. Shires may not levy amounts exceeding—for the general rate—the total calculated yield of 2d. in the £ on the unimproved capital value of ratable land; for the total of all rates in urban areas (other than general, water local, and sewerage local) the total calculated yield of 2s. in the £ on assessed annual value of ratable land in the urban area, and for either a water or sewerage local rate the calculated yield of 2s. in the £ on the assessed annual value of land liable to the rate.

The definitions of the values to be assessed for local government purposes are as follows:—

The unimproved capital value of land is the amount for which the *fee-simple* estate in such land could be sold under such reasonable conditions as a *bona-fide* seller would require, assuming that the actual improvements had not been made.

The improved capital value is the amount for which the *fee-simple* estate of the land, with all improvements and buildings thereon, could be sold.

The assessed annual value is nine-tenths of the fair average rental of land with improvements thereon, but must not be less than 5 per cent. of the improved capital value.

The three valuations mentioned must be made in municipalities, but the unimproved value only is required in shires, except in urban areas, in which the assessed annual value also must be obtained. The collection of the improved capital value, and the assessed annual value is optional in the shires generally.

The unimproved capital value of mines is ascertained as follows:—

- (1) *Coal and Shale*.—A sum equal to 3s. per ton of large coal and shale, and 1s. 6d. per ton of small coal, on the average annual output during the preceding three years.
- (2) *Other Mines*.—A sum equal to 20 per cent. of average annual value of ore or mineral won during the preceding three years.
- (3) *Idle or Undeveloped Mines*.—A sum equal to twenty times the annual rental.

All land is ratable except that used for public cemeteries, commons, reserves, libraries, hospitals, benevolent institutions, charities, or by the University of Sydney or a college thereof; Crown lands unoccupied or occupied only by public works in course of construction; land occupied by churches or places for public worship, and land which is a public place. Land vested in the Railway Commissioners or in the Sydney Harbour Trust is ratable.

For rating purposes, the values of land are those determined by the Valuer-General under the Valuation of Land Act, 1916. Valuations must be made and a list supplied to each council at least once in three years. Special temporary provision is made for the determination of values until the list is furnished to the council.

A municipal council may borrow, subject to approval of the Governor, an amount up to 20 per cent. of the unimproved capital value of ratable land in its area, but a shire council may not raise loans exceeding thrice the amount of its last year's income. Councils may obtain limited overdrafts by approval of the Minister.

A municipality, if found to be in necessitous circumstances, is entitled to a sum not exceeding 3s. 4d. in the £ on the general rate collected, but none received endowment in 1921.

An endowment of not less than £150,000 is paid annually to shire councils according to an apportionment made triennially by the Governor.

The Governor may proclaim as a city any municipality which has, during the five years next preceding such proclamation, had an average population of at least 20,000 persons, an average income of at least £20,000, and is an independent centre of population and is not a suburb of any other municipality or centre of population.

A suitable area in any shire, after a poll of electors has been taken, may be proclaimed by the Governor as an urban area, in which case the council of the shire exercises similar powers for such area as are conferred upon municipal councils. A committee of three members may be elected, who, after estimating required expenditure, may request the shire council to fix and levy a local rate sufficient for their purpose. The amount so collected, after a deduction not exceeding 5 per cent. by the shire council, is placed to the credit of the urban committee, to be expended only for the purposes for which it was raised. Subject to the approval of the shire council, loans may be raised, but only upon the credit of a local loan rate raised upon the urban area.

Prior to 1906, when shires were constituted, only a very small portion of the State had been incorporated, as will be seen from the following statement,



which shows the areas incorporated and unincorporated in 1906 in the three great land divisions of the State, exclusive of the Federal Territory:—

Division.	Incorporated.	Unincorporated.	Total.
	sq. miles.	sq. miles.	sq. miles.
Eastern ... ..	1,932	92,881	94,813
Central ... ..	571	88,579	89,150
Western ... ..	282	125,216	125,498
Total ... ..	2,785	306,676	309,461

The area and population of districts incorporated on 31st December, 1921, excluding Lord Howe Island and the Federal Territory of Canberra and Jervis Bay, are shown below. The only parts of the State unincorporated were the portion of the Western Division not included in municipalities, the Murrumbidgee Irrigation Areas, which are administered by the Water Conservation and Irrigation Commission, and Lord Howe Island, which is under the control of an Administrator.

	Area (sq. miles).	Population.
In Metropolitan Municipalities... ..	209	976,820
In Country Municipalities ... ..	2,636	460,590
In Shires ... ..	181,140	676,130
Total (incorporated)... ..	183,985	2,113,540
Western Division (portion unincorporated) ...	125,454	16,153
Total ... ..	309,439	2,129,693

From this statement it is apparent that only 59·4 per cent. of the area of the State is administered by local government, whereas the population embraced therein is 99·2 per cent. of the total population of the State.

The following table shows the area, population and the assessed values of rateable property in the local government areas of the State as at 31st December, 1921, the Metropolitan and Country Districts being shown separately. The figures for the Metropolis include Kuring-gai Shire, but exclude certain municipalities included in the Metropolitan area as defined in Schedule IV of the Local Government Act of 1919, viz., Auburn, Bankstown, Dundas, Ermington and Rydalmere, Granville, Lidcombe, and Parramatta. The figures for the Metropolitan area include the abovenamed municipalities, together with the shires of Hornsby, Sutherland, and Warringah.

Local Bodies.	Area.	Population.	Unimproved Capital Value.	Improved Capital Value.	Assessed Annual Value.
	acres.	No.	£	£	£
Metropolitan Area—					
City of Sydney ... ..	3,327	110,220	35,887,412	99,647,060	4,484,118
Suburbs (including Kuring-gai Shire) ..	114,972	816,180	53,588,989	*	*
Total, Metropolis .. ..	118,299	926,400	89,476,401	*	*
Extra-Metropolitan .. ..	329,878	104,400	8,577,113	*	*
Total, Metropolitan† .. ..	448,177	1,030,800	98,053,514	*	*
Country—					
Municipalities .. ..	1,687,197	460,590	27,004,608	74,565,192	5,354,867
Shires .. ..	115,615,360	622,150	123,398,006	*	*
Total, Country .. ..	117,302,557	1,082,740	150,402,614	*	*
Grand Total .. ..	117,750,734	2,113,540	248,456,128	*	*

\* As shires generally do not assess the annual or improved capital values of properties this table cannot be completed.

† Schedule IV, Local Government Act, 1919.

The financial position of the bodies in these areas on the same date was as follows :—

Local Bodies.	Total Revenue.			Total Expenditure.	Total Liabilities.	Total Assets.
	Rates Levied.	Other.	Total.			
<b>Metropolitan Area—</b>	£	£	£	£	£	£
City of Sydney .. .. .	752,654	1,315,499	2,068,153	2,060,635	13,190,947	13,612,090
Suburbs (including Kuring-gai Shire) .. .. .	1,107,831	368,223	1,476,054	1,571,914	1,542,516	1,112,982
Total, Metropolis .. .. .	1,860,485	1,683,722	3,544,207	3,632,549	14,733,763	14,765,072
Extra-Metropolitan .. .. .	144,623	72,173	216,796	234,503	205,732	215,846
Total, Metropolitan* .. .. .	2,005,108	1,755,895	3,761,003	3,867,052	14,939,495	14,980,917
<b>Country—</b>						
Municipalities .. .. .	715,261	745,174	1,460,435	1,354,462	2,804,388	3,381,696
Shires .. .. .	922,513	467,327	1,389,840	1,415,475	273,850	634,687
Total, Country .. .. .	1,637,774	1,212,501	2,850,275	2,769,937	3,078,238	4,516,383
Grand Total .. .. .	3,642,882	2,968,396	6,611,278	6,636,989	18,017,733	19,497,300

\* Schedule IV, Local Government Act, 1919.

Similar particulars of the operations of individual councils are published annually in the Statistical Register of New South Wales.

#### VALUATIONS BY LOCAL GOVERNING BODIES.

Local government finance is based upon taxation of land and improvements thereon, and the rates whence revenue is derived are levied upon the assessed values of all lands, including Crown lands. Lands exempt from rating are those which constitute a public place, unoccupied Crown lands, Federal lands and buildings, or premises used exclusively for religious or charitable purposes or as public hospitals.

Valuations of ratable property must be made at intervals not exceeding three years by a competent and sworn valuer appointed by the Council, which legally is bound to accept the valuation list when it is presented, and to adopt it as the valuation book for the period beginning 1st January next ensuing. Any owner of property dissatisfied with the value placed upon his land may lodge objection with the Council and appeal to the nearest Court of Petty Sessions, if the valuation does not exceed £5,000, and to the Land and Valuation Court if the valuation exceeds that amount. The Council has no power to amend any valuation, except in case of manifest error, except by direction of a Court.

The former system operated for many years without any centralised supervision to secure uniformity; but, in 1916, the Valuation of Land Act provided that standard valuations of the whole of the lands of New South Wales should be made by a Government official, and that these should be used as bases for all taxation purposes. The officer appointed to have this valuation carried out was called the Valuer-General, and up to the end of 1922 the lands of forty-eight municipalities and eight shires had been dealt with. In cases where the Valuer-General has acted, all authority in making valuations is taken away from local bodies, which must accept the new valuation list when it is delivered, and act upon it from 1st January, next ensuing. A council may, however, ask the Valuer-General to revalue any land which it considers has not been correctly valued.

The wide extent of local government has provided assessments of land values so comprehensive as to embrace practically the whole of the occupied lands of the State, and these provide a satisfactory basis for measuring the value of landed property in New South Wales. In considering them, however, it should be recollected that there is little uniformity between the valuations of individual councils, and in most cases the assessments are considerably below market values. They are, moreover, incomplete, since they exclude the extensive unincorporated lands of the Western Division and the valuable lands embraced in the Murrumbidgee Irrigation Areas, which are administered by a commission.

In the following table are shown the aggregate valuations, in similar groups to those on page 335, of all local government bodies for the year 1921, together with a comparison of the unimproved values and the value of improvements:—

Division.	Unimproved Value of Land.			Value of Improvements.		
	Total.	Per Head.	Per Acre.	Total.	Per Head.	Per Acre.
	£	£	£ s. d.	£	£	£ s. d.
Sydney—City ...	35,887,000	326	10,786 11 11	63,760,000	578	19,164 8 3
Suburbs* ...	53,589,000	66	466 2 1	93,165,000	114	810 6 7
Metropolis ...	89,476,000	96	756 7 1	156,925,000	169	1,326 10 3
Extra-Metropolitan	8,577,000	82	26 0 0	11,267,000	108	34 3 1
Total, Metropolitan	93,053,000	95	218 15 7	168,192,000	163	375 5 7
Country—Municipalities	27,005,000	59	16 0 1	47,561,000	103	23 3 10
Shires ...	123,398,000	198	1 1 4	123,398,000	198†	†1 1 4
Total Incorporated Areas ...	248,456,000	113	2 2 2	339,151,000	160	2 17 9

\* Including Kuring-gai Shire. † Estimated.

#### *Valuations by Municipalities.*

In the following table the unimproved and improved values of municipalities only in 1920 and 1921 are compared. It should be noted that the Metropolitan areas, as shown below, do not include shires, and the figures therefore differ from those given on page 335.

Division.	Unimproved Value.			Improved Value.		
	1920.	1921.	Increase.	1920.	1921.	Increase.
	£	£	per cent.	£	£	per cent.
Sydney—City ...	33,077,620	35,887,412	8·50	84,580,400	99,647,060	17·81
Suburbs ...	46,847,825	51,027,987	8·92	127,414,223	141,632,450	11·16
Metropolis ...	79,925,445	86,915,399	8·75	211,994,623	241,279,510	13·81
Extra-Metropolitan	3,567,209	3,701,665	3·77	9,411,002	10,094,687	7·26
Total, Metropolitan	83,492,654	90,617,064	8·53	221,405,625	251,374,197	13·54
Country ...	25,493,054	27,004,608	5·93	68,489,506	74,565,192	8·87
Total Municipalities	108,985,708	117,621,672	7·92	289,895,131	325,939,389	12·50

The value of improvements, ascertained by deducting the unimproved from the improved values shown above, is shown in the following statement, and it will be seen that increases occurred in all divisions:—

Division.	Value of Improvements.		
	1920.	1921.	Increase.
Sydney—	£	£	per cent.
City ... ..	51,592,780	63,759,648	23·80
Suburbs ... ..	80,566,598	90,604,463	12·46
Metropolis ... ..	132,069,178	154,364,111	16·88
Extra-Metropolitan ...	5,843,793	6,393,022	9·40
Total, Metropolitan ...	137,912,971	160,757,133	16·57
Country ... ..	42,996,452	47,560,584	10·61
Total Municipalities	180,909,423	208,317,717	15·15

The capital and annual values of properties in all municipalities show a great increase during the ten years since 1911, as will be seen from the following table:—

Municipalities.	1911.			1921.		
	Unimproved Capital Value.	Improved Capital Value.	Assessed Annual Value.	Unimproved Capital Value.	Improved Capital Value.	Assessed Annual Value.
	£	£	£	£	£	£
City of Sydney...	23,940,030	55,520,640	2,498,429	35,887,412	99,647,060	4,484,118
Suburbs...	25,942,704	63,855,054	4,335,169	51,027,987	141,632,450	10,047,357
Metropolis ...	49,882,734	119,375,694	6,833,598	86,915,399	241,279,510	14,531,475
Extra-Metropolitan	1,390,886	3,130,997	209,379	3,701,665	10,094,687	671,081
Total, Metropolitan ...	51,273,620	122,506,691	7,042,977	90,617,064	251,374,197	15,202,556
Country...	18,570,857	44,353,489	3,024,266	27,004,608	74,565,192	5,354,867
Total Municipalities ...	69,844,477	166,860,180	10,067,243	117,621,672	325,939,389	20,557,423

The ratio of Assessed Annual Value to Improved Capital Value in 1911 was 6·03 per cent., and, in 1921, 6·3 per cent.; and as the assessed annual value is nine-tenths of the actual annual value, the proportions per cent. of annual value to improved value were, in 1911, 6·63 per cent., and in 1921 6·93 per cent.

The increases, both absolute and relative, during the ten years from 1911 to 1921, were as follow:—

Municipalities.	Unimproved Capital Value.		Improved Capital Value.		Assessed Annual Value.	
	Total Increase.	Increase per cent.	Total Increase.	Increase per cent.	Total Increase.	Increase per cent.
	£		£		£	
City of Sydney ...	11,947,382	49·9	44,126,420	79·5	1,985,689	79·5
Suburbs ... ..	25,085,283	96·7	77,777,396	120·2	5,712,188	131·8
Metropolis ...	37,032,665	74·2	121,903,816	102·1	7,697,877	112·7
Extra-Metropolitan	2,310,779	166·1	6,963,690	222·4	461,702	220·5
Total Metropolitan	39,343,444	76·7	128,867,506	105·2	8,159,579	115·9
Country ... ..	8,433,751	45·4	30,211,703	79·4	2,230,601	77·1
Total Municipalities	47,777,195	68·4	159,079,209	95·3	10,490,180	104·2

The ratio of increase in the unimproved capital value was highest in the suburbs of Sydney, and lowest in the country municipalities. The suburbs also show the highest ratio for the improved capital value, and for the assessed annual value, while the lowest for these values appears in the country districts.

These results are attributable largely to the operations of the Valuer-General, whose valuations have been made in the past two years, principally in the suburbs of Sydney and Newcastle, where in all cases values were assessed considerably higher than those assessed formerly by the councils' valuers.

A comparison of the improved and unimproved capital values with the assessed annual value in the year 1921 is given below. With regard to the ratio of the improved capital value, the suburban and country municipalities were 7·1 and 6·7 per cent. respectively. The highest ratio of the unimproved capital value occurred in the country municipalities, which yielded 19·8 per cent. The corresponding rates for the City of Sydney were only 4·5 per cent. and 12·5 per cent., the average for the whole of the municipalities being 6·2 per cent. and 17·5 per cent. respectively :—

Municipalities.	Assessed Annual Value.	Ratio of Assessed Annual Value to —	
		Improved Capital Value.	Unimproved Capital Value.
	£	per cent.	per cent.
City of Sydney ... ..	4,484,118	4·5	12·5
Suburbs ... ..	10,047,357	7·1	19·7
Metropolis ... ..	14,531,475	6·0	16·7
Extra-Metropolitan ... ..	671,081	6·6	18·1
Total, Metropolitan ... ..	15,202,556	6·0	16·8
Country ... ..	5,354,867	7·2	19·8
Total Municipalities ... ..	20,557,423	6·3	17·5

#### *Valuations by Shires.*

It is not possible to give the improved capital value, or the assessed annual value of land in shires, as the shire councils are not compelled to make those valuations, and only a few record them.

The unimproved capital value of land in shires from 1911 to 1921 is shown below, the total increase during the period mentioned being £36,644,000.

Year.	Unimproved Capital Value.	Year.	Unimproved Capital Value.
	£		£
1911 ... ..	94,190,000	1917 ... ..	107,695,000
1912 ... ..	97,661,000	1918 ... ..	103,133,000
1913 ... ..	99,452,000	1919 ... ..	110,881,000
1914 ... ..	103,451,000	1920 ... ..	120,872,000
1915 ... ..	104,746,000	1921 ... ..	150,834,000
1916 ... ..	105,698,000		

During the ten years specified the aggregate valuations of shires were raised by 38·9 per cent., and as the area embraced remained practically

unchanged, this represents roughly the assessed increment of rural land values in the period.

*Valuations by the Valuer-General.*

There has always been a tendency on the part of municipal valuers to under-estimate the value of properties for purposes of rating, and the extent of this under-valuation can now be gauged by a comparison of the valuations of the Valuer-General in certain municipalities and shires with those previously adopted by the local body. The valuations relate to forty-eight municipalities and eight shires, of which thirty were metropolitan, ten were in the Newcastle district, eight were other country municipalities, while three of the shires were within the metropolitan area. The Valuer-General's figures for unimproved capital value, improved capital value, and assessed annual value are on the average respectively 11 per cent., 11 per cent. and 13 per cent. higher than the municipal values, while in the shires valued the increase on unimproved capital value was 9 per cent.

In the following table the Valuer-General's figures are compared with the values made by the local assessors for rating purposes, and the percentage of increase is shown also :—

Particulars.	48 Municipalities.			8 Shires.		
	Unimproved Capital Value.	Improved Capital Value.	Assessed Annual Value.	Un-improved Capital Value.	Improved Capital Value.	Assessed Annual Value.
Council's Valuation £ 000	53,209	149,021	10,632	13,828	*	*
Valuer-General ... £ 000	58,929	164,713	12,018	15,070	33,385	1,898
Increase ... .. £ 000	5,711	15,692	1,386	1,242	...	...
Proportional increase %	10·73	10·53	13·04	8·98	...	...

\* No valuation made.

TAXATION BY LOCAL GOVERNING BODIES.

The total revenue collected in 1921 by all the local governing bodies from rates and charges amounted to £5,403,315, equal to £2 11s. 2d. per head of the population residing in the taxable districts. This includes £2,603,635, rates collected by the municipalities; £1,034,147, rates collected by shires; and £1,765,433, rates collected by the various Water and Sewerage Boards referred to later. The distribution of the total amount is as follows :—

Local Bodies.	General Rates.	Special and Loan Rates.	Total.	Per head of population living in local areas.
	£	£	£	£ s. d.
Municipalities (including City of Sydney)	2,255,986	347,649	2,603,635	1 16 3
Shires ... ..	959,446	74,701	1,034,147	1 10 7
Metropolitan water and sewerage charges	1,607,429	...	1,607,429	1 8 1
Hunter District water and sewerage charges.	152,694	...	152,694	1 2 9
Grafton and South Grafton Water Board	5,310	...	5,310	0 17 6
Total ... ..	£ 4,980,865	422,350	5,403,215	2 11 2

The corresponding total amounts per head of population in 1911 and 1916 were £1 6s. and £1 15s. 4d. respectively.

A comparative statement of the total and *per capita* Local Government rates and charges imposed in each of the five years, 1918–22, will be found on pages 52 and 53 of this Year Book, where they are considered in relation

to the total taxation imposed in the State. The total taxation per head imposed in 1920-21 was about 75 per cent. higher than that of 1916-17, but the increase in Local Government taxation was only 45 per cent.

### *City of Sydney Ratings.*

The Sydney Corporation Act of 1902 directed that improved property within the city should be assessed at a fair average annual value, with an allowance for outgoings not exceeding 10 per cent., and the unimproved property at a maximum of 6 per cent. on its capital value. On the value of such assessment a city rate not exceeding 2s. in £ might be levied, exclusive of lighting. In 1902, the rate was reduced from 24d., which had been imposed in 1901, to 22d., and still further reduced to 21d. in 1903, which continued until 1915. The Act provided for a special local rate not exceeding 6d. in the £ of annual value for any work for the particular benefit of one locality, but only if two-thirds of the ratepayers of the locality petitioned for such work; occasional advantage of this power was taken for street-watering, though not of late years. The amending Acts of 1908 and 1916 repealed the former provisions, and the rate for 1922 was 4½d. in the £ of unimproved capital value, which covers all services.

The following table shows the rate struck in the £, and the total amount levied, in each year from 1901 to 1922 :—

Year.				Rate struck in the £.	Total Amount Levied.	Equivalent Average Rate on U.C.V.
				pence.	£	pence.
1901	...	...	...	24 on A.A.V. ...	195,164	Not available
1902	...	...	...	22 on A.A.V. ...	184,780	do
1903	...	...	...	21 on A.A.V. ...	180,477	do
1908	...	...	...	21 on A.A.V. ...	196,854	2·33
1909	...	...	...	{ 21 on A.A.V. ...	{ 284,500	3·41
1912	...	...	...	{ 1 on U.C.V. ...	{ 326,651	3·27
1913	...	...	...	{ 21 on A.A.V. ...	{ 390,678	3·93
1915	...	...	...	{ 1½ on U.C.V. ...	{ 466,943	4·10
1916	...	...	...	4 on U.C.V. ...	520,537	4·00
1917	...	...	...	3½ on U.C.V. ...	455,040	3·50
1918	...	...	...	4½ on U.C.V. ...	465,958	3·50
1919	...	...	...	4½ on U.C.V. ...	587,376	4·25
1920	...	...	...	4½ on U.C.V. ...	623,766	4·75
1921	...	...	...	5 on U.C.V. ...	747,654	5·00
1922	...	...	...	4½ on U.C.V. ...	729,096	4·75

### *Suburban and Country Municipality Ratings.*

The other municipal councils were formerly empowered to raise revenue by rates not exceeding 1s. in the £ for ordinary purposes and the same amount for special purposes, with 6d. in addition for street watering. The amount of each rate was calculated upon the rental value, which was represented by nine-tenths of the fair average annual rental of all buildings and cultivated lands, or lands let for pastoral, mining, or other purposes, plus 5 per cent. of the capital value of the fee-simple of all unimproved lands.

Municipalities and shires which availed themselves of the provisions of the Country Towns Water and Sewerage Acts were empowered to levy a rate for each service not exceeding a maximum of 2s. in the £ on the assessed annual value of land and tenements, in addition to the ordinary municipal rates.

In order to aid municipalities in their formative stages, the 1897 Act provided for endowment by the State during a period of fifteen years, and this right has been preserved in the Act of 1919. In each of the first five years after incorporation every municipality is entitled to a sum equal to

the whole amount actually received from general rates; in each of the next succeeding five years, a sum equal to one-half; and in each of the next five years, a sum equal to one-fourth of such receipts. After the expiry of fifteen years the State assistance ceases, and any further aid from the State is in the nature of a special grant. At the close of the year 1921 there were no municipalities entitled to the original statutory endowment.

Suburban and country municipalities are obliged to levy a general rate on the unimproved capital value of all ratable land, and may levy additional, special, local, or loan rates on either the unimproved or the improved capital value. The only rates based on the annual value are those charged by the Metropolitan and the Hunter District Water Supply and Sewerage Boards.

As previously stated, the general rate must be not less than 1d. in the £ on the unimproved capital value of all ratable land, and the total amount to be derived from the general rate and additional rates taken together must not exceed the amount yielded by a rate of 2d. in the £ on the unimproved value and 2s. in the £ on the assessed annual value of all ratable land. In 1921 only three municipalities levied additional general rates, the remainder confining themselves to one general rate. The variation in the general rates is rather remarkable, as in the suburbs of Sydney in 1921 they ranged from 2½d. to 6d., and in the country from 1½d. to 18d.

The majority of suburban councils in 1921 levied general rates between 4d. and 5d., the next in number being between 5d. and 6d., while in the country the highest proportion levied 6d. and over, the next in order being between 4d. and 5d., and between 5d. and 6d., followed by those levying 3d. and under 4d. The councils which levied 6d. and over in the £ during 1921 were Ballina, Barraba, Bowral, Cobar, Dubbo, Goulburn, Greta, Maclean, Narrabri, Nyngan, Port Macquarie, Raymond Terrace, Walcha, Warialda, Warren, and Wyalong, each 6d.; Adamstown, Coonamble, Manilla, Mudgee, Murrurundi, and Young, each 6½d.; Deniliquin, 6¾d.; Aberdeen, Blayney, Braidwood, Cooma, Moree, Orange, and Singleton, 7d.; Bathurst, Hay, and Wallsend, 7½d.; Narromine, 7¾d.; Carcoar, Murrumburrah, Narrabri West, Scone, and Wentworth, each 8d.; Broken Hill, 8¾d.; Wilcannia, 11d.; Bourke, 11½d.; and Hillgrove, 18d. These rates are exclusive of the amounts levied on mines. None of the suburban councils levied 1d. in the £, but 1½d. was imposed in two country municipalities.

The first year in which the general rate was levied on the unimproved capital value was 1908, and a comparison of the general rate struck for various years since then is shown below:—

Year.	Number of Municipalities which levied a General Rate on Unimproved Capital Value of—						Amount of General Rates Levied.
	1d. and under 2d.	2d. and under 3d.	3d. and under 4d.	4d. and under 5d.	5d. and under 6d.	6d. and over.	
1908—							£
Suburban Municipalities ... ..	1	11	17	9	3	...	547,110
Country " "	31	36	42	26	9	5	
1911—							
Suburban " "	...	4	16	18	2	...	656,116
Country " "	23	29	43	30	17	7	
1916—							
Suburban " "	...	2	6	26	5	1	954,340
Country " "	13	17	42	42	17	13	
1921—							
Suburban " "	...	1	7	20	18	1	1,508,332
Country " "	5	9	18	33	28	43	



There has been a marked tendency towards higher rating, particularly in the country municipalities, where the rise in assessed values of ratable property has been less than in the suburbs.

One hundred and twenty-six municipalities levied special, local, and loan rates on the unimproved capital value in 1921, ranging from  $\frac{1}{16}$ d. to 27d. in the £, and twenty-two on the improved capital value, ranging from  $\frac{1}{8}$ d. to 3d. in the £.

#### Shire Ratings.

The general rates of shires have always been levied on the unimproved capital value, but in a few cases a small special rate has been imposed on the improved value. The number of shires which levied general rates at each individual rate from 1907 to 1921 is shown in the following table :—

General Rate levied in £.	Number of Shires.						
	1907.	1911.	1917.	1918.	1919.	1920.	1921.
d.							
$\frac{1}{16}$	1	1	1	1	...	...	...
$\frac{1}{8}$	1	3	2	2	2	2	...
$\frac{3}{8}$	3	2	4	3	1	1	1
$\frac{1}{2}$	...	...	...	2	2	2	...
1	104	64	18	15	12	14	13
$1\frac{1}{8}$	...	3	2	...	1	...	...
$1\frac{1}{4}$	10	23	11	9	11	8	8
$1\frac{3}{8}$	...	1	1	1	...	1	1
$1\frac{1}{2}$	12	22	27	24	23	13	12
$1\frac{5}{8}$	...	1	...	...	...	...	1
$1\frac{3}{4}$	...	...	4	3	3	8	7
2	3	14	66	76	81	87	83
$2\frac{1}{8}$	...	...	...	...	...	...	4
3	...	...	...	...	...	...	6
Total ... ..	134	134	136	136	136	136	136
Amount of General Rate levied £	358,751	461,971	670,234	708,449	738,824	818,361	959,446

The tendency towards higher taxation is very marked, as in 1907 only 25, or 18·7 per cent. of the shires imposed a general rate exceeding 1d., and 109 or 81·3 per cent. imposed a rate of 1d. or less, whereas in 1921 no fewer than 83, or 61 per cent., levied the maximum general rate of 2d. in the £, and 10 councils took advantage of the special provisions of the Act, and after inquiry were allowed to levy rates beyond that amount.

The general rates levied in 1921 and the unimproved capital value in each case were as follow :—

No. of Shires.	General Rate levied in £.	Unimproved Capital Value.
	d.	£
1	$\frac{3}{8}$	951,635
13	1	19,478,403
8	$1\frac{1}{4}$	10,417,043
1	$1\frac{3}{8}$	1,813,203
12	$1\frac{1}{2}$	15,134,811
1	$1\frac{5}{8}$	1,179,787
7	$1\frac{3}{4}$	8,185,649
83	2	63,146,751
4	$2\frac{1}{4}$	2,869,539
6	3	7,657,635
136	...	130,834,456

On 48 per cent. of the ratable property in shires the general maximum rate of 2d. in the £ was levied in 1921, while 8 per cent. was subject to even higher rates.

In addition to the general rates, additional general, special, local, and loan rates were also levied by forty-five shires, ranging from  $\frac{1}{15}$ d. to 8 $\frac{3}{4}$ d. in the £.

The purposes for which these special, local, and loan rates were imposed were:—Roads and street improvements and maintenance, kerbing and guttering, water supply, drainage, electricity, street lighting, street watering, sanitary and garbage, parks, fire brigade, destruction of noxious weeds, foreshores improvement, town improvements, and payment of interest, &c., on loans current.

The total amount of general and additional general rates levied was £959,446, equal to an average rate of 1·76d. in the £, and of special and local rates £74,701, equal to an average rate of 0·14d. in the £ on the unimproved value of land. These amounts represent the rates actually levied in respect of the year 1921, and do not agree with the amount shown later, the difference being due to the inclusion of interest on unpaid rates.

#### CITY OF SYDNEY.

The City of Sydney was incorporated on 20th July, 1842, and was originally divided into six wards.

Great dissatisfaction soon arose as to the manner in which the affairs of the Corporation were conducted, and following upon the recommendation of a Select Committee of the Legislative Assembly, the Council was dissolved, and the administration transferred to three commissioners, who controlled the affairs of the city from the beginning of 1854 to the end of 1857, when a new Council, consisting of sixteen aldermen—two for each ward—came into existence.

During the years 1900 to 1905 Amending Acts were passed, dividing the city into twelve wards, each returning two aldermen, and important changes were effected as to the franchise, sub-tenants and lodgers being placed on the rolls, and extended powers were conferred on the Council as to resumption of lands for city improvements, the control of hoardings, the proper cleansing of footways, the prevention or regulation of the smoke nuisance from furnaces and chimneys, the regulation and control of refreshment stalls and stands, the control of juvenile hawkers and shoe-blacks, the prevention of betting in public places, while the tenure of office of aldermen was altered to three years.

In 1908 a further Amending Act was passed, containing several important provisions. Commencing with the year 1909, the Council was compelled to levy a rate, not less than 1d. in the £, upon the unimproved capital value, in addition to any rate imposed under the Act of 1902. Under the former Act the rate levied in 1915, the last year affected by the 1908 Act, was 1 $\frac{1}{2}$ d. in the £ on the unimproved capital value, and under the 1902 Act 21d. in the £ on the assessed annual value. It is provided, however, that the total amount leviable shall not exceed the amount which would be yielded by a rate of 3d. in the £ on the unimproved capital value, and 2s. in the £ on the assessed annual value, taken together, of all ratable property, and the valuation of the unimproved capital value must be made at least once in every five years. The Council was empowered also to establish milk depôts, to control certain parks, to widen certain streets, and the Lending Branch of the Public Library was vested in the Council by the Government.

The Municipality of Camperdown was amalgamated with the City on 1st January, 1909, and the Council now consists of twenty-six aldermen

elected every third year by thirteen wards. The Lord Mayor is elected by the aldermen from their own number, but under an Act passed in 1916, in the event of an equal number of votes being polled, the Governor in Council may appoint one of the aldermen to the position. The last-mentioned Act also regulated the election of the city members of the Metropolitan Board of Water Supply and Sewerage, and of the Fire Brigades Board, extended the power of the Council in regard to resumptions, in order to provide workmen's dwellings, and made further provision for the extension of the city boundaries.

The Sydney Corporation (Dwelling-houses) Act, 1912, enables the City Council to erect and let dwelling-houses, and under a further amending Act, passed in 1916, the Council may levy rates on persons owning pipes, wires, cables, and rails on, under, over, or through any public places under the control of the Council, excepting properties owned by the Crown. Also, under the same Act, the maximum general rate on the unimproved value of all ratable property leviable is 6d. in the £.

#### *City of Sydney Accounts.*

The Council of the City of Sydney conducts its affairs under the City Corporation Acts, and therefore is not bound by the provisions of the Local Government Act. The various accounts of the city are now kept in the same manner as those of all other local bodies.

#### *City of Sydney—Receipts.*

The receipts from the various funds in 1921 amounted to £2,068,153, the City Fund contributing £933,114, the Public Markets Fund, £108,200, the Resumption Account, £81,870, and the Electric Lighting Fund, £944,969. Although the receipts and disbursements of the Public Markets Fund and the Resumption Account are shown separately in the City accounts, those funds are really subsidiary to the City Fund, their balances at the end of the year being transferred to the last-mentioned fund.

The following is a statement of the receipts of the City Fund in the year 1921 under appropriate headings :—

	£
General Purposes—Rates, £752,654 ; other, £13,802	766,456
Works ... ..	12,649
Health Administration ... ..	38,748
Public Services ... ..	61,609
Municipal Property ... ..	23,740
Miscellaneous ... ..	29,912
Total ... ..	£933,114

City rates, £752,654, form practically the whole of the receipts under the heading "General Purposes." Under the amending Act of 1915, the City rate is now levied on the unimproved capital value only.

#### *City of Sydney—Disbursements.*

The disbursements in 1921 amounted to £2,060,635, viz.: City Fund, £804,269; Public Markets Fund, £111,101; Resumptions Account, £176,548; and Electric Lighting Fund, £968,717. Shown under the same headings as the receipts, the following were the disbursements of the City Fund :—

	£
General Purposes ... ..	68,151
Works ... ..	147,830
Health Administration ... ..	239,470
Public Services... ..	115,483
Municipal Property ... ..	50,753
Miscellaneous (Interest, Sinking Fund, &c.) ...	182,582
Total ... ..	£804,269

Salaries, which amounted to £35,918, absorbed a very large share of the expenses for General Purposes. Of the sum spent on Public Works, street maintenance accounted for £70,562, footpaths for £33,507, and wood-paving for £31,027. On City cleansing £150,531 were expended, and this was the main item in Health Administration. The large amount shown under "Miscellaneous" includes the Annual Debenture indebtedness, which was £73,410 for interest, commission, etc., and £21,495 for Sinking Fund contributions.

The receipts and disbursements of the Public Markets Fund were £108,200 and £111,101 respectively, the latter amount being inclusive of interest and sinking fund, showing a deficit of £2,901 on the year's transactions, which has been included in the City Fund. The Queen Victoria Markets brought in revenue to the extent of £34,733, or 32 per cent. of the total; and the receipts from the Municipal Markets amounted to £38,264, or about 35 per cent. of the whole.

The receipts and disbursements of the Resumption Account were £81,870 and £176,548 respectively, showing a debit of £94,678 after paying interest and contribution to sinking fund, and this deficit was also transferred to the City Fund.

#### *City Electricity Undertaking.*

The lighting of the streets by the old gas system proved inadequate for the requirements of the City, and in 1904 an electric scheme was inaugurated. The new lights were first used in July of that year, part of the City being illuminated. Since that date rapid progress has been made, and at the present time the whole of the City streets and public parks have been connected, while a number of suburban municipalities receive their light from this source. The expenditure and income for the year ended 31st December, 1921, are shown below :—

Expenditure.			Income.		
	£			£	
Generation of Electricity ...	272,858		Private Lighting ...	473,504	
Distribution ...	127,536		Public Lighting ...	64,934	
Management ...	147,153		Power Supply ...	365,734	
Purchase of Electricity ...	57,439		Rentals—Meters, Motors, Lamps,		
Miscellaneous ...	31,497		&c. ...	36,549	
			Miscellaneous ...	2,404	
Total ...	£639,483				
Balance carried to Net Revenue					
Account ...	303,642				
Total ...	£943,125		Total ...	£943,125	

Generation forms the largest item of expenditure, accounting for 42·7 per cent. of the whole, or 46·9 per cent. of the total expenditure, less the electricity purchased. Distribution cost 19·9 per cent., management 23 per cent., electricity purchased 9·0 per cent., and miscellaneous 5·4 per cent. of the whole.

The gross profit, carried to the Net Revenue Account was £305,486, viz., £303,642 for 1921, as shown previously, and £1,844 brought forward from 1920. The charges against the profits were :—Interest on Debentures and Overdraft, £169,181; Sinking Fund contribution, £22,875; Depreciation Reserve Account, £116,007; written off flotation expenses, &c., £9,009; Fire insurance contribution, £7,300; Damages account, £3,851; and Coal mine acquisition, £1,011; making a total of £329,234. The net loss for the year 1921, after paying interest and Sinking Fund, was therefore, £23,748, which was carried forward to Profit and Loss Account for 1922.

Below is a summary of the balance-sheet of the Electricity Works Fund on 31st December, 1921 :—

Liabilities.			Assets.		
		£			£
Debenture Loans...	...	3,771,505	Capital Expenditure — Land, Buildings, Machinery, Plant, etc. ...	...	4,640,263
Sinking Fund ...	...	261,188	Sinking Fund Investments—		
Reserve Accounts ...	...	966,867	Commonwealth Loans ...	...	90,900
Sundry Creditors...	...	172,674	New South Wales Treasury...	...	24,787
Deposits (Consumers) ...	...	39,523	Debentures—Sydney Municipal Council ...	...	138,700
Commonwealth Bank ...	...	286,994	Commonwealth Bank ...	...	2,000
			Stores, Materials, Coal, etc. ...	...	326,487
			Sundry Debtors, Consumers' Balances, etc. ...	...	173,317
			Other ...	...	78,349
			Balance—Net Revenue Account	...	23,748
Total ...	...	£5,498,751	Total ...	...	£5,498,751

The loan capital, which forms 68.6 per cent. of the liabilities, returned about 6½ per cent. profit for the year. Interest payments and Sinking Fund contribution for the year amounted to £192,056, and £116,007 were allowed for depreciation. The Sinking Fund was represented by investments of £256,587 in Government, Municipal, and Bank securities.

The following table serves to emphasise the rapid growth of the electric lighting undertaking. The figures quoted show the actual profit or loss made in specified years, excluding the accumulated profit or loss brought forward from previous years :—

		1906.	1911.	1916.	1920.	1921.
Quantity Sold	Units.	3,927,330	17,768,210	48,532,901	96,221,685	108,177,043
Expenditure...	£	21,567	95,428	211,263	503,643	639,482
Income ...	£	40,984	172,693	433,996	756,512	943,125
Surplus ...	£	19,417	*94,861	222,733	252,869	303,643
Charges against Surplus	£	20,602	66,470	192,071	250,788	329,234
Net gain ...	£	(—) 1,185	28,391	30,662	2,081	(—) 25,592

\* Includes surplus of a purchased company, £17,596.

(—) Denotes loss.

#### *City of Sydney—Balance-sheet.*

The following is a Summary of Liabilities and Assets of all funds of the City of Sydney as at 31st December, 1921 :—

Liabilities.			Assets.		
		£			£
Debentures current ...	...	9,341,742	Bank Balances and Cash ...	...	699,942
Bank Balances ...	...	457,394	Landed Properties, Baths, and Sundries ...	...	6,689,789
Sundry Creditors ...	...	784,141	Machinery, Plant, Furniture, Stores, &c. ...	...	4,271,076
Sinking Funds ...	...	1,060,786	Sundry Debtors ...	...	291,293
Reserves ...	...	1,546,884	Sinking Funds ...	...	1,037,268
			Other Investments ...	...	427,609
			Flotation Expenses and Sundries	...	200,109
Excess of Assets ...	...	461,143	Revenue Accounts ...	...	35,004
		£13,652,090			£13,652,090

Notwithstanding the large loan indebtedness the assets exceeded the liabilities by £461,143, and it should be noted that the debentures included £3,771,505 borrowed in connection with electric lighting, and £984,142 for public markets. As the proceeds of those loans have been spent on reproductive municipal works, the undertakings referred to should provide the annual interest charges and sinking fund contributions, but they were not quite self-supporting in 1921. Landed properties, baths, etc., which comprise about 49 per cent. of the assets, include such large items as Public Markets, £1,455,633; Town Hall, etc., £885,959; Resumptions, £3,069,930; Electric Light, Land, and Buildings, £763,406. The accumulated Sinking Fund, £1,037,268, as against a Debenture Debt of £9,341,742, must be regarded as a satisfactory cover.

*Progress of City of Sydney.*

The following table shows the progress of the City of Sydney during the five years ended 1921:—

Particulars.	1917.	1918.	1919.	1920.	1921.
Area ... .. Acres	3,327	3,327	3,327	3,327	3,327
Population ... .. No.	114,430	113,610	112,110	111,070	110,220
	£	£	£	£	£
Unimproved Capital Value	31,130,368	31,880,295	31,831,054	33,077,620	35,887,412
Improved Capital Value ...	81,976,260	82,027,200	82,808,760	84,580,400	99,647,060
Assessed Annual Value ...	3,533,779	3,691,224	3,726,395	3,806,118	4,484,118
City Fund—					
Income—Rates ...	456,612	466,558	587,809	624,083	747,654
Other sources	74,195	87,704	115,379	155,285	185,460
Total ...	530,807	554,262	703,188	779,368	933,114
Expenditure ...	493,903	526,083	609,739	717,138	804,269
Public Markets Fund—					
Income ... ..	80,583	87,370	103,977	110,306	108,200
Expenditure ... ..	88,860	89,891	99,082	105,876	111,101
Resumption Account—					
Income ... ..	85,048	78,720	75,667	78,672	81,870
Expenditure ... ..	160,585	161,207	163,589	170,527	176,548
Electricity Works Fund—					
Income ... ..	464,968	542,818	600,978	756,512	944,969
Expenditure ... ..	484,839	468,949	581,867	754,431	968,717
All Funds—					
Total Income ... ..	1,161,406	1,263,170	1,483,810	1,724,858	2,068,153
Total Expenditure ... ..	1,228,187	1,246,130	1,454,277	1,747,972	2,060,635
Excess of Income ...	(—) 66,781	17,040	29,533	(—)23,114	7,518
All Funds—					
Liabilities ... ..	10,469,229	10,664,813	11,122,589	12,243,384	13,190,947
Assets ... ..	10,734,793	11,120,974	11,578,854	12,714,012	13,652,090
Excess of Assets ...	265,564	456,161	456,265	470,628	461,143
Loans outstanding ...	7,478,960	7,502,558	7,464,170	7,997,690	9,341,742
Sinking Fund ... ..	729,447	821,121	827,028	933,544	1,045,868

(—) Denotes excess of Expenditure.

The foregoing figures show that the Unimproved Capital Value increased by 15·3 per cent.; the Improved Capital Value by 21·5 per cent; and the Assessed Annual Value by 26·9 per cent. The total receipts were 78·1 per cent. higher in 1921 than in 1917, while the expenditure increased by 67·8 per cent., and although there was a deficit of £66,781 in the former year, the operations of the latter period resulted in a surplus of £7,518. The total

liabilities were larger by 26 per cent., and the assets by 27·2 per cent., the balance sheet showing an excess of assets amounting to £461,143 for the year 1921. Comparing the loans outstanding at the close of each year, the total increased by 24·9 per cent., and the Sinking Fund by 43·5 per cent. The position of the last mentioned fund is very favourable, as in 1917 it represented 9·7 per cent. of the indebtedness, while in 1921 the ratio had risen to 11·2 per cent.

#### MUNICIPALITIES.

##### *General Finance.*

The Local Government Act, 1919, prescribes that there must be a General Fund in each area, to which must be paid the proceeds of all general and additional general rates, loans, grants, and endowment from the Government, and miscellaneous income not required by law to be carried to other funds. The expenditure from the General Fund must be on administration, health, roads, repayment of loans and other public services.

There must be a Special Fund for each special rate levied, and for each work or service conducted by the Council in respect of which the special rate has been made, and the fund may be used only for the purposes of such work or service. A Local Fund also must be kept for each local rate levied, with restrictions similar to those in the case of the Special Funds, and the expenditure of the Local Fund is confined to works in the specified portion of the area.

A Trading Fund must be kept in respect of each trading undertaking conducted by the Council, into which all moneys received, whether from rates or other sources, loans, transfers, etc., must be paid, and a separate account must be kept. The fund may only be applied to the maintenance of the works, payment of interest and principal of loans, or other purposes incidental to the working of the undertaking.

All loan proceeds must be administered by the service to which they relate, and cannot be transferred from one fund to another, except by authority of the Minister.

The revenue of special and local funds must provide the money to meet not only the ordinary cost of maintaining the services, but also the obligations of the corresponding loan funds.

In addition to the above-mentioned funds, there must also be a Trust Fund, which consists of receipts from the Government pending transfer to appropriate funds; deposits from contractors, etc., and any other amounts held in trust by the Council.

The Ordinances under the Act prescribe the system of accounts to be adopted. The accounts must be "Income and Expenditure Accounts," kept by double entry, and each "fund" must have a separate banking account. Thus there is shown for each General, Special, Local, or Trading Fund a Revenue Account, or Profit and Loss Account, giving the total expenditure chargeable for the period, whether paid or unpaid, and the total income for the same period, whether received or outstanding. A balance-sheet is also required for each fund with appropriate liabilities and assets, and aggregate balance-sheets and revenue accounts must also be published. Only "realisable" assets may be shown, so that the whole of the roads, bridges, drains, and other constructive work, are excluded.

In the tables which follow the areas formerly described as Suburban and Country have been altered to conform to the Metropolitan area defined in Schedule IV of the Local Government Act of 1919, and the figures relating to municipalities for 1914 have been reclassified in order to show the

comparison with 1921 on the new basis. The municipalities transferred from the Country to the Metropolitan area are as follow :—Auburn, Bankstown, Dundas, Ermington and Rydalmere, Granville, Lidcombe (formerly Rookwood), and Parramatta.

Considerable increases in the transactions of the General Fund, and decreases in the Special, Local, and Loan Funds, are apparent when compared with 1914, due to the application of the Local Government Act of 1919, under which many Special, Local, and Loan Funds were absorbed by the General Fund.

### *Expenditure.*

The gross expenditure during 1921 by the various municipalities under the Local Government Act amounted to £3,018,966, which was £23,442 more than the income. The following statement shows the expenditure allocated to the various funds in 1914 and 1921.

Funds.	1914.			1921.		
	Metro-politan.	Country.	Total.	Metro-politan.	Country.	Total.
General Fund—	£	£	£	£	£	£
Administrative ex-						
penses ... ..	60,736	55,348	116,084	108,837	87,153	195,990
Public Works ...	422,617	213,158	635,775	1,058,165	354,123	1,412,288
Health Adminis-						
tration ... ..	77,061	36,310	113,371	226,329	224,432	450,761
Public Services ...	99,098	42,720	141,818	158,257	79,420	237,677
Municipal Property	25,087	30,205	55,292	46,599	40,155	86,754
Miscellaneous ...	16,435	16,017	32,452	14,956	5,988	20,944
	701,034	393,758	1,094,792	1,613,143	791,271	2,404,414
Trading Accounts ...	66	91,443	91,509	13,673	330,221	343,894
Special and Local Funds	61,832	240,164	301,996	37,688	232,970	270,658
Loan Funds ... ..	70,062	43,091	113,153	...	...	...
Gross Expenditure ...	832,994	768,456	1,601,450	1,664,504	1,354,462	3,018,966

The greatest expenditure was naturally from the General Fund, which now includes practically all the Loan Funds, and in 1921 accounted for 80 per cent. of the whole. The trading concerns of the municipalities are gas and electricity; the Special and Local Funds relate to water supply, sewerage, sanitary and garbage, street-watering, street-lighting, footpaths, guttering, drainage, fire brigades, parks and reserves, and other miscellaneous matters.

The proportion of each class to the total expenditure and the rates per head of population in municipalities were as follows :—

Head of Expenditure.	1914.		1921.	
	Proportion to Total.	Per Head of Population.	Proportion to Total.	Per Head of Population.
	per cent.	£ s. d.	per cent.	£ s. d.
General Fund ... ..	68·4	1 0 2	79·6	1 16 3
Trading Accounts ... ..	5·7	0 1 8	11·4	0 5 2
Special and Local Funds ...	18·8	0 5 7	9·0	0 4 1
Loan Funds ... ..	7·1	0 2 1	.....	.....
Total ... ..	100·0	1 9 6	100·0	2 5 6



In 1921, of the expenditure by municipalities from the General Fund, 58·7 per cent. was on public works. The amount expended on the actual maintenance and construction of works of a public character, viz., roads, streets, bridges, culverts, drains, wharves, ferries, etc., amounted to £1,302,742, while the expenses of supervision, such as the salary of engineers, etc., amounted to £45,642, or 3·2 per cent. of the total amount expended.

The relative cost of administration was largest in the country, being 11 per cent. of the total expenditure; the Metropolitan municipalities spent only 6·7 per cent. under the same heading, and the City of Sydney 8·4 per cent. So far as the municipalities are concerned, the figures relating to administrative expenses quoted above refer only to those payable for general purposes; other services, such as sanitary and garbage, etc., transfer their share of the administrative expenses to the general fund, and these amounts are not included in the above figures. The high relative cost of administration in the country is due to the sparse population and small revenue of many of the municipalities, as in such cases the expenses on account of salaries, etc., are larger proportionately than those in the more closely settled localities.

The Trading Accounts, which relate to the supply of gas or electricity, will be treated later under those headings, and the special Water and Sewerage Funds will also be discussed separately.

#### *Income.*

The gross income in 1921 of all the municipalities brought under the provision of the Local Government Act was £2,995,524, including £57,238 received as endowments or grants from the Government. Under the same funds as shown in the expenditure, the income in 1914 and 1921 was as follows :—

Funds.	1914.			1921.		
	Metro- politan.	Country.	Total.	Metro- politan.	Country.	Total.
General Fund—	£	£	£	£	£	£
Rates levied (including interest) ... ..	596,465	301,305	897,770	1,033,791	495,553	1,529,344
Government Endowments, etc. ... ..	745	4,371	5,116	595	950	1,585
Sundries (General Purposes) ... ..	13,546	7,846	21,392	17,580	9,430	27,010
Public Works* ... ..	55,127	43,127	98,254	225,839	57,455	283,294
Health Administration* ... ..	23,373	14,035	37,408	113,315	192,811	306,126
Public Services* ... ..	16,450	13,307	29,757	35,056	29,774	64,830
Municipal Property ... ..	22,042	36,155	58,197	46,357	43,890	90,247
Miscellaneous ... ..	2,794	518	3,312	9,207	1,306	10,513
	730,542	420,664	1,151,206	1,481,740	831,209	2,312,949
Trading Accounts ... ..	12	124,369	124,381	12,002	379,806	391,808
Special and Local Funds ... ..	69,493	280,082	349,575	41,347	249,420	290,767
Loan Funds ... ..	63,993	61,566	125,559	...	...	...
Gross Income ... ..	864,040	886,681	1,750,721	1,535,089	1,460,435	2,995,524

\* Including Government grants.

The amount of Government assistance included in the above income in 1921 amounted to £57,238, of which £1,585 represented special endowment, and the contributions to public works (roads, streets, bridges, etc.) were £51,466; while £3,696 was granted for Health Administration, chiefly for park improvements, etc., and £491 for Public Services.

Stating the receipts from each source as a percentage of the total income, and also according to population, the following results are obtained:—

Source of Income.	1914.		1921.	
	Proportion to Total.	Per head of Population.	Proportion to Total.	Per head of Population.
	per cent.	£ s. d.	per cent.	£ s. d.
General Fund... ..	65·7	1 1 2	77·2	1 14 10
Trading Accounts ... ..	7·1	0 2 4	13·1	0 5 11
Special and Local Funds ... ..	20·0	0 6 5	9·7	0 4 5
Loan Funds ... ..	7·2	0 2 4	...	...
Total ... ..	100·0	1 12 3	100·0	2 5 2

The bulk of the general fund income was received from rates, the average in 1921 for all municipalities being 66·1 per cent. The next important source of income was from health administration, which accounted for 13·2 per cent. of the total income, a large proportion of the revenue in this case being derived from sanitary and garbage fees. Income from public works represented 12·3 per cent. of the total receipts, but about 18 per cent. of the revenue from that source was provided by the Government as grants. In the suburbs, the Metropolitan Board of Water Supply and Sewerage levies charges in addition to those made by the municipalities, and reference to these is made later.

#### *Special and Local Funds.*

The expenditure and income of the Special and Local Funds in the years 1914 and 1921 are shown in the following table:—

Funds.	1914.			1921.		
	Metro-politan.	Country.	Total.	Metro-politan.	Country.	Total.
Expenditure—	£	£	£	£	£	£
Water Supply ... ..	...	84,733	84,733	...	142,384	142,384
Sewerage and Drainage ... ..	4,887	6,131	11,018	27	48,253	48,280
Sanitary and Garbage ... ..	39,553	118,818	158,371	8,648	...	8,648
Street Lighting ... ..	90	23,476	23,566	22,936	35,783	58,719
Street Watering ... ..	1,010	542	1,552	116	746	862
Footpaths and Gutters ... ..	...	...	...	5,810	4,407	10,217
Miscellaneous ... ..	16,292	6,464	22,756	151	1,397	1,548
Total ... ..	61,832	240,164	301,996	37,688	232,970	270,658
Income—						
Water Supply ... ..	...	93,699	93,699	...	156,942	156,942
Sewerage and Drainage ... ..	5,561	6,490	12,051	8	51,548	51,556
Sanitary and Garbage ... ..	39,634	126,149	165,783	10,485	...	10,485
Street Lighting ... ..	83	25,554	25,637	24,057	34,297	58,354
Street Watering ... ..	1,221	697	1,918	71	835	906
Footpaths and Gutters ... ..	...	...	...	6,582	4,434	11,016
Miscellaneous ... ..	15,990	34,497	50,487	144	1,364	1,508
Total ... ..	62,469	287,086	349,575	41,347	249,420	290,767

The Water and Sewerage Services are the most important of those mentioned above so far as the country is concerned, the suburbs of Sydney being supplied by the Metropolitan Board of Water Supply and Sewerage.

*Balance-sheet.*

The following statement indicates the nature of the liabilities and assets of the municipalities as at 31st December, 1921, and in compiling the table, amounts due from one fund to another have been excluded:—

Funds.	Metropolitan Area.	Country.	Total.
	£	£	£
<b>Liabilities—</b>			
Sundry creditors, including Loans outstanding and interest thereon ... ..	1,412,554	943,086	2,355,640
Debts due to Government and interest thereon ...	98,899	1,692,334	1,791,233
Bank overdraft ... ..	142,881	77,341	220,222
Other (including Deposits on Contracts and unexpended portion of Government grants) ... ..	13,791	91,627	105,418
<b>Total ... ..</b>	<b>1,668,125</b>	<b>2,804,388</b>	<b>4,472,513</b>
<b>Assets—</b>			
Cash in hand and Bank balances ... ..	276,776	257,780	534,556
Outstanding rates and interest ... ..	107,395	144,149	251,544
Sundry debtors... ..	74,137	156,600	230,737
Furniture ... ..	19,219	22,624	41,243
Stores and materials ... ..	27,573	68,532	96,105
Land, buildings, plant, and machinery ... ..	671,577	3,170,927	3,842,504
Other ... ..	39,192	61,684	100,876
<b>Total ... ..</b>	<b>1,215,869</b>	<b>3,881,696</b>	<b>5,097,565</b>
<b>Excess of Assets ... ..</b>	<b>...</b>	<b>1,077,308</b>	<b>625,052</b>
<b>Excess of Liabilities ... ..</b>	<b>452,256</b>	<b>...</b>	<b>...</b>

*Loans.*

Under the Local Government Act a municipality may borrow to an amount which, with existing loans, does not exceed 20 per cent. of the unimproved capital value of ratable lands. If any municipality has exceeded the statutory maximum it cannot borrow further until the total amount owing falls below the limit.

The total amount of loans raised during 1921 was £2,066,492, including £1,548,923 borrowed by the City of Sydney, £324,460 by metropolitan, and £193,109 by country municipalities; while the sinking funds of the City of Sydney were increased by £112,324, those of metropolitan and country municipalities by £1,396 and £3,949 respectively. Apart from the liability to the State under the Country Towns Water and Sewerage Act, the total amount of municipal loans outstanding at the close of the year was £11,544,917, and towards this amount there was at the credit of the sinking funds a sum of £1,068,250.

Rates of interest ranged from 3½ per cent., which was carried by £180,915, to 7½ per cent., which, however, was payable only on £1,051, and the amount paid and due as interest on loans during the year was £503,436. The total indebtedness was £11,544,917, bearing an average rate of interest of 4·36 per

cent., viz., 4.50 per cent. on the loans of the City of Sydney, 3.76 per cent. on those of the metropolitan municipalities, and 3.78 per cent. on those of the country municipalities.

The average rate of interest payable on all loans is hardly, however, an index of the true value of municipal debentures to the investors, as out of a total debt of £11,544,917, the sum of £4,012,375 pays interest at 4 per cent., and £2,124,400 at 3½ per cent., and of these amounts the metropolitan municipalities are responsible for £3,995,240 at 4 per cent., and the whole floated at 3½ per cent. The country municipalities borrowed £241,674 at 4½ per cent., £128,064 at 5 per cent., and £121,637 at 6 per cent.

The total debt per head of population in municipalities on 31st December, 1921, amounted to £8 0s. 8d., without allowance being made for sinking funds, while the yearly charge for interest is 7s. 0d. per head. These sums, compared with the resources of the municipalities, appear by no means formidable. The amount of indebtedness per head in previous periods was as follows:—February, 1907, £3 5s. 2d.; December, 1911, £4 17s. 6d.; and December, 1916, £7 1s. 1d.

The following statement shows the outstanding loans on 31st December, 1921, and the sinking funds set apart to meet them; the New South Wales figures include £2,800 raised in Victoria:—

Division.	Municipal Loans Outstanding.			Sinking Funds.	Interest paid and due on Loans 1921.
	New South Wales.	London.	Total.		
	£	£	£	£	£
Sydney—City ... ..	7,841,742	1,500,000	9,341,742	1,045,868	420,527
„ Other Metropolitan...	1,376,719	...	1,376,719	5,909	51,690
Country... ..	814,456	12,000	826,456	16,473	31,219
Total ... ..	£10,032,917	1,512,000	11,544,917	1,068,250	503,436

Temporary loans, amounting altogether to £183,859, which bear interest at current bank rates, and loans payable on demand amounting to £159,434, are included in the above table.

The loans are redeemable at various periods after 1921, and the amount to be repaid in London is £1,512,000; or about 13.1 per cent. of the total, and the amount of debentures held locally is £10,032,917.

#### SHIRES.

At the end of 1921 there were 136 shires working under the Local Government Act, 98 being in the Eastern Land Division and 38 in the Central.

The shires vary in area from 36 square miles in Ku-ring-gai, in the metropolitan area, to 5,736 square miles in Lachlan, the headquarters of which are at Condobolin, the smallest shires being in the most closely settled parts of the State.

A general rate, not less than 1d. in the £, and not more than 2d. in the £, may be levied by shires on the unimproved capital value of all ratable land. If, after inquiry, the general rate of 1d. is found to be more than sufficient to meet requirements it may be reduced, and if 2d. is insufficient it may be increased by permission of the Governor; in 1921 only one shire levied a general rate lower than 1d., and 10 shires levied rates higher than 2d. in the £.

In many shires the general rate was not sufficient to meet the requirements, and the State granted subsidies in these cases. As already stated, endowments are fixed every third year, and are determined according to the extent of the shire, the probable revenue from a rate of 1d. in the £, the necessary expenditure, the extent of roads and other public works to be constructed and maintained, and other matters. The statutory sum of £150,000 granted to shires under the Local Government Act was allotted for the three years, commencing on the 1st January, 1922, as follows:—

58 shires received no endowment.

8 shires received from £280 to £400.

5        „        „        £650 „ £700.

9        „        „        £750 „ £900.

10       „        „        £920 „ £1,200.

7        „        „        £1,250 „ £1,500.

11       „        „        £1,600 „ £2,000.

14       „        „        £2,100 „ £2,880.

12       „        „        £3,260 „ £5,000.

2        „        „        £7,000 each.

As a general rule, the highest amounts were allowed to the areas on the North Coast, and the shires which received £7,000 were Dorrigo and Tweed.

In 1921 the Government paid £178,420 as endowment to the shires, and a further sum of £152,753 was paid as grants for special purposes, making the total subvention from the State £331,173.

### *Expenditure.*

The following statement shows the expenditure of shires during 1921 in comparison with the year 1914:—

Particulars.	1914.			1921.		
	Expenditure.			Expenditure		
	Total.	Per cent.	Per head of population in Shires.	Total.	Per cent.	Per head of population in Shires.
<b>General Fund—</b>	£		£ s. d.	£		£ s. d.
Administrative expenses...	95,760	9·6	0 2 11	140,300	9·0	0 4 2
Public works ...	801,542	80·5	1 4 8	1,187,349	76 2	1 15 2
Health administration ...	8,064	0·8	0 0 3	89,344	5·8	0 2 8
Public services ...	14,757	1·5	0 0 5	33,782	2·2	0 1 0
Shire property ...	15,277	1·5	0 0 6	18,721	1·2	0 0 7
Miscellaneous ...	9,275	0·9	0 0 4	9,418	0·6	0 0 3
Special and local funds ...	51,796	5·2	0 1 7	69,104	4·4	0 2 0
Trading Accounts ...	.....	...	.....	9,370	0·6	0 0 3
<b>Total Expenditure</b>	<b>£ 996,471</b>	<b>100·0</b>	<b>1 10 8</b>	<b>1,557,388</b>	<b>100 0</b>	<b>2 6 1</b>

In the General Fund, of the amount spent on works in 1921, £76,293 represents the cost of supervision (salaries of engineers, &c.); £33,152 were for sundry expenses; and the actual amount spent on maintenance and construction was £1,077,904.

The total receipts from all sources in 1921 were £1,547,601, and as the administrative expenses, as already stated, amounted to £140,300, the cost of collection was 9·1 per cent.

### Income.

The principal heads of income of shires in 1921 were as follow, and for purposes of comparison the 1914 figures are attached :—

Particulars.	1914.			1921.		
	Income.			Income.		
	Total.	Per cent.	Per head of population in Shires.	Total.	Per cent.	Per head of population in Shires.
General Fund—	£		£ s. d.	£		£ s. d.
General rates, &c. ...	609,580	58·3	0 18 9	968,886	62·6	1 8 8
Government endowment... ..	146,077	14·0	0 4 6	178,420	11·5	0 5 3
Public works ... ..	197,754	18·9	0 6 1	188,533	12·2	0 5 7
Health administration ... ..	4,889	0·4	0 0 2	84,014	5·4	0 2 6
Public services ... ..	10,069	1·0	0 0 4	15,540	1·0	0 0 5
Shire property ... ..	13,738	1·3	0 0 5	16,145	1·1	0 0 6
Miscellaneous ... ..	5,171	0·5	0 0 2	8,939	0·6	0 0 3
Special and local funds ... ..	57,714	5·6	0 1 9	74,784	4·8	0 2 3
Trading Accounts ... ..	.....	...	.....	12,340	0·8	0 0 4
Total Income... ..	£ 1,044,992	100·0	1 12 2	1,547,601	100·0	2 5 9

The principal item in the receipts on account of public works was Government grants, which amounted to £152,181, while the same source was responsible for £572 received for health administration. The total assistance received from the Government in 1921 amounted to £331,173, or 21·4 per cent. of the total income.

### Balance-sheet.

The financial position of the shires on 31st December, 1921, was strong, as there was an excess of assets of £393,372. The balance-sheet appears as follows :—

Liabilities.		Assets.	
	£		£
Sundry Creditors (including Loans outstanding and interest thereon) ... ..	213,543	Cash in hand and bank balances	157,643
Bank overdraft ... ..	89,008	Outstanding rates and interest ...	107,234
Other (including deposits on Contracts and unexpended portion of Government grants)... ..	51,722	Sundry debtors ... ..	33,587
		Furniture ... ..	16,279
		Stores and materials ... ..	25,442
		Land, buildings, plant, and machinery ... ..	404,730
		Other ... ..	2,730
Total ... ..	354,273	Total ... ..	747,645

### Loans.

The Local Government Act, 1919, empowers Shire Councils to borrow a sum equal to thrice the amount of the annual income. The loans are secured and charged upon the income of the general funds of the shire, and are repayable in annual or half-yearly instalments of principal and interest. At the 31st December, 1921, the amount of loans outstanding, including temporary loans, was £198,581.

The following are some particulars regarding the loans of shires at the end of 1921, from which it will be seen that the indebtedness is small compared with the resources :—

Amount of Loans outstanding—						£	£
Ordinary	...	...	...	...	...	76,250	
Temporary	...	...	...	...	...	122,331	
Total	...	...	...	...	...		198,581
Total amount of Sinking Fund	...	...	...	...	...		1,115
Floated in 1921	...	...	...	...	...		45,470
Interest due in 1921	..	...	...	...	...		3,439

The interest payable during 1921 amounted to £3,439, the rates of interest paid varying from  $3\frac{1}{2}$  to 7 per cent. If loans amounting to £46,421 (mainly loans of a temporary character) be deducted from the total loans outstanding, on account of the rate of interest payable not being defined, the average rate of interest payable was 5.75 per cent.

The total indebtedness per head of the population in the shires amounted to 5s. 11d., while the yearly charge for interest was approximately 3d. per head, compared with 1s. 10d. and 1d. respectively in 1920. The debt per head in 1916 was 4s. 9d., but corresponding particulars relating to previous periods are not available.

The whole of the shire loans were raised within New South Wales, and are redeemable at various periods from 1922 to 1940.

The total municipal and shire loans outstanding at the 31st December, 1921, amounted to £11,743,498, of which only £1,512,000 were floated in London, and the interest payable was £506,875, viz., £421,185 locally and £85,690 elsewhere.

#### WATER SUPPLY FOR COUNTRY TOWNS.

The Country Towns Water Supply and Sewerage Acts of 1880, 1894, and 1905 were passed with the object of assisting councils to construct general systems of water supply and sewerage. These Acts were repealed by the Local Government Act of 1919, but all liabilities to the Government incurred under the former Acts are not affected, and all by-laws made are still in force. At the end of June, 1922, fifty-eight municipal councils and three shires had availed themselves of the privilege offered as regards the water service, and works were under construction in other municipalities.

The amount required for carrying out the works is advanced by the State. The Council, however, has the option of supervising and constructing the works, failing which the Government undertakes these duties. The sum advanced is repayable by instalments, with interest on the unpaid balances at a rate to be fixed; the first payment is required to be made twelve months after the date of the transfer of the works, and the number of yearly repayments limited to a maximum of 100. The Act also provides for the issue of licenses, for the recovery of rates, for making by-laws for the assessment of lands, and for other purposes. The total amount of debts owing by municipalities and shires on water works at the 30th June, 1922, was £1,427,614, and the aggregate annual instalment repayable was £60,125. The last-mentioned sum is approximate only, as in a few cases the payment has not been definitely fixed.

The combined revenue accounts of the municipalities and shires which maintain waterworks, for the year ended 31st December, 1921, are shown below :—

Expenditure.	Municipalities.	Shires.	Income.	Municipalities.	Shires.
	£	£		£	£
Management ... ..	23,511	156	Rates levied ... ..	110,477	1,290
Working and maintenance	69,609	935	Rents (Meter and other) ..	2,258	...
Interest payable to Govern-			Water sales ... ..	36,825	368
ment ... ..	46,463	247	Garden charges, &c. ...	7,382	338
Other ... ..	2,801	...			
Balance ... ..	14,558	658			
Total ... ..	£ 156,942	1,996	Total ... ..	£ 156,942	1,996

With regard to the expenditure, management charges accounted for 16·5 per cent., working and maintenance for 49·1 per cent., interest payable to Government 32·5 per cent., and miscellaneous items 1·9 per cent.

The income figures show that rates contributed 70·3 per cent. of the receipts, rents 1·4 per cent., water sales 23·4 per cent., and garden charges, &c., 4·9 per cent.

The combined balance-sheet on 31st December, 1921, was as follows :—

Liabilities.	Municipalities.	Shires.	Assets.	Municipalities.	Shires.
	£	£		£	£
Capital Debt due to Government...	1,220,980	6,053	Waterworks—plant, buildings, &c. ... ..	1,339,003	8,497
Interest due to Govern-			Outstanding rates ...	23,303	192
ment ... ..	46,289	3	Bank balances, fixed deposits, and cash in hand	41,621	723
Sundry creditors ... ..	62,709	951	Stores and materials ...	7,052	1
Excess of Assets ... ..	121,593	2,714	Sundry debtors ... ..	40,592	308
Total... ..	£ 1,451,571	9,721	Total... ..	£ 1,451,571	9,721

The total amount advanced by the Government practically represents the present value of the services. The amount of rates outstanding on the date mentioned was £23,495, while the bank balances, cash in hand, investment in war loans, and fixed deposits were £42,344.

The above figures are exclusive of the Grafton and South Grafton Waterworks, which are controlled by a corporate board, and whose transactions are shown separately on page 371.

#### SEWERAGE AND DRAINAGE WORKS.

Only twenty-one municipal councils have taken advantage of the Act providing for the construction of sewerage and drainage works in country towns, and the capital debt and annual repayments on 20th June, 1922, were £513,415 and £22,184 respectively. Other sewerage systems are in existence in several places; but they have been constructed apart from the Act, and, with few exceptions, the operations have been on a minor scale.



Some of the municipalities do not levy special sewerage rates, and therefore do not keep a separate account. The revenue accounts of the other municipalities for the year ended 31st December, 1921, are shown below :—

Expenditure.				Income.			
			£				£
Management	...	...	7,368	Rates levied	...	...	36,305
Working and maintenance	...	...	12,913	Other	...	...	15,092
Interest payable to Government	...	...	15,521				
Other	...	...	12,286				
Balance	...	...	3,309				
Total	...	...	£51,397	Total	...	...	£51,397

Practically the only source of income is from rates, the other receipts representing contributions to works, sales of fittings, etc. Of the expenditure, management charges represented 15·3 per cent., working and maintenance 26·8 per cent., interest payable to Government 32·3 per cent., and other expenses 25·6 per cent.

The combined balance-sheet was as follows :—

Liabilities.				Assets.			
			£				£
Capital Debt due to Government	...	...	401,721	Works and Plant	...	...	400,623
Interest due to Government	...	...	10,979	Outstanding rates	...	...	4,644
Sundry creditors	...	...	5,747	Bank balance and cash	...	...	16,373
Excess of Assets	...	...	21,193	Stores and materials	...	...	3,422
				Sundry debtors	...	...	14,578
Total	...	...	£439,640	Total	...	...	£439,640

#### DRAINAGE TRUSTS.

In addition to the water and sewerage works shown in the foregoing tables, thirty-three trusts for reclamation of swamp and other lands were in operation on the 30th June, 1922, with a total length of 123 miles, the total area served being 134,273 acres. The total cost as gazetted was £120,088, and the annual payments were £7,043. The owners of the lands improved by these works are responsible for the repayment of the capital expenditure, and are also required to provide for the cost of maintenance and administration.

#### GASWORKS.

The Local Government Act authorises the construction of works for public lighting, and enables municipalities to provide private consumers with gas. In addition to twenty-one municipalities supplying coal-gas, acetylene and other gas plants have been established in some municipalities.

The operations of the municipalities with coal gasworks in 1921 will be seen from the subjoined statements showing the Gasworks Trading Undertaking revenue account and balance-sheet.

The following is the revenue account, and particulars for 1914 are appended for purposes of comparison :—

Expenditure.	1914.	1921.	Income.	1914.	1921.
	£	£		£	£
Manufacture ... ..	38,268	95,804	Private lighting ...	56,808	119,469
Distribution ... ..	4,363	11,429	Public lighting ...	10,914	16,160
Management expenses	10,032	22,351	Sale of residual pro-		
Public lighting ... ..	3,083	5,795	ducts ... ..	7,312	12,534
Other ... ..	911	9,882	Other ... ..	660	1,295
Balance ... ..	19,037	4,197	Balance ... ..	.....	.....
Total ... ..	£ 75,694	149,458	Total ... ..	£ 75,694	149,458

On the total operations for 1921 there was a gross profit of £4,197. Five municipalities made a loss on trading, and even where the undertaking was carried on at a profit, the gain in each case was small. The manufacture of gas accounted for 65·98 per cent. of the expenditure, as compared with 67·54 per cent. in 1914, and private lighting for 79·94 per cent. of the income, as against 75·05 per cent. in 1914.

The following is an analysis of the total expenditure in 1921, according to the total quantity of gas sold. The prices charged to private consumers ranged from 3s. 9·6d. to 11s. 3·7d. per thousand cubic feet, being, on the average, 7s. 6·3d. per thousand cubic feet.

Expenditure per 1,000 cubic feet sold.

	s.	d.
Manufacture ... ..	5	1·2
Distribution... ..	0	7·3
Management and general expenses, including depre-		
ciation ... ..	1	2·3
Public lighting ... ..	0	3·7
Interest on loans and overdrafts...	0	3·4
Other ... ..	0	2·9
Total ... ..	7	8·8

The operation shown in the Net Revenue Appropriation Account resulted in a profit on the whole gasworks undertakings of the municipalities of £7,515. This was due mainly to the receipt of the loan rates, which amounted to £4,698. The credit balance carried forward on this account was £58,875.

The balance-sheet of the Gasworks Trading Undertakings for 1921 is given below :—

Liabilities.	Assets.
	£
Sundry creditors ... ..	290,533
Loans and overdrafts, including	
interest accrued due ... ..	23,546
Reserves ... ..	233
Excess of Assets ... ..	Investments, Bank balance, and
	cash ... ..
	20,718
Total ... ..	£335,030
	Total ... ..
	£335,030

The total excess of assets amounted to £173,284, to which each municipality, with two exceptions, contributed.

## ELECTRICITY WORKS.

The following municipal councils have erected electric lighting plants :— Sydney, Manly, Albury, Broken Hill, Cooma, Corowa, Fairfield, Glen Innes, Goulburn, Inverell, Junee, Maitland West, Moss Vale, Murrumburrah, Murwillumbah, Narrabri, Narrandera, Newcastle, Penrith, Queanbeyan, Quirindi, Singleton, Tamworth, Temora, Tenterfield, Tumut, Wagga Wagga, Wollongong, and Young. The shires of Bland, Bulli, Crookwell, Kyogle, and Lake Macquarie have also established electric lighting plants.

The following statement shows the results of the trading operations of the electricity works during 1921 in respect of the municipalities and shires mentioned above, with the exception of the City of Sydney electric lighting undertaking, which has already been dealt with. The figures for municipalities in 1914 are included for comparative purposes.

Income.	Municipalities.		Shires.	Expenditure.	Municipalities.		Shires.
	1914.	1921.	1921.		1914.	1921.	1921.
	£	£	£		£	£	£
Private lighting ...	26,255	104,250	7,599	Generation ...	21,711	120,901	3,901
Public lighting ...	10,252	16,325	2,268	Distribution ...	3,058	14,827	721
Power supply ...	9,064	74,363	571	Management, &c.	4,308	31,021	3,582
Rents of meters, &c. ...	1,523	6,729	579	Public lighting ...	1,541	3,850	406
Other ...	1,593	5,025	82	Other ...	4,234	20,223	760
				Balance ...	13,835	15,870	1,729
Total... ..	48,687	206,692	11,099	Total... ..	48,687	206,692	11,099

Generation of electricity is the largest item of expenditure, accounting in 1921 for 62·3 per cent. of the whole. Distribution of the current cost 7·8 per cent., management 17·3 per cent., and other expenses 12·6 per cent. The gross profit of these concerns to the combined municipalities and shires was £17,599, which amount was transferred to the Net Revenue Appropriation Account. From this account £6,723 were transferred to Sinking Fund and Reserves, and other expenses totalled £634; £23,535 were received on account of rates, and other receipts amounted to £1,621, leaving a net profit of £35,398.

Setting out the expenditure in 1921 on the basis of the total units sold, the following result is obtained :—

Item.	Municipalities.	Shires.
	pence. per unit.	pence. per unit.
Generation ... ..	1·54	2·46
Distribution ... ..	0·19	0·45
Management, general, depreciation, &c. ... ..	0·39	2·26
Public lighting ... ..	0·05	0·26
Interest on loans and overdraft ... ..	0·19	0·34
Other, including bad debts written off ... ..	0·07	0·13
Total ... ..	2·43	5·90

The figures for the shires are much higher than those for the municipalities; this is attributable to the fact that the municipalities are operating on a larger scale than the shires, with a consequent lessening of manufacturing costs.

The average price per unit charged to consumers in municipalities for lighting was 5·88d., and for power 1·29d.; the corresponding figures for shires were 5·98d. and 2·32d.

The balance-sheet of the Trading Funds in 1921 was as follows:—

Liabilities.	Municipalities.	Shires.	Assets.	Municipalities.	Shires.
	£	£		£	£
Sundry creditors ...	52,204	10,451	Materials, stock, &c. ...	482,678	25,936
Loans and overdrafts ...	416,671	19,979	Sundry debtors ...	58,082	2,729
Reserves...	28,908	.....	Fixed deposits, bank		
Excess of assets...	162,676	7,410	balance, and cash...	119,699	9,175
Total ...	660,459	37,840	Total ...	660,459	37,840

The combined liabilities of municipalities and shires were £528,213, and the total assets amounted to £698,299, leaving a credit balance of £170,086. As only five municipalities and no shire showed an excess of liabilities, which was small in each case, the position with regard to the electricity works is very satisfactory.

#### COUNTY COUNCILS.

The Governor, by proclamation, may constitute as a County District, for local governing purposes, groups and parts of municipalities or shires, or of both, and in each district a County Council, consisting of delegates elected by the municipalities and shires interested, can be incorporated. A County Council may undertake any function allotted to it in accordance with the Act for the joint benefit of the areas included within the County District. Upon the request of the councils of the municipalities and shires concerned the Governor may proclaim powers to exercise, for the benefit of the County District, any duties which by law those councils or any of them were entitled to perform. The power to levy rates or to borrow is not deemed to have been conferred upon a County Council, unless it is expressly mentioned in the delegation. Where the power to deal with aquatic pests has been granted to the County Council, it is required to prepare annually the amount of the proposed expenditure and the total income, and to assist the councils concerned with the additional amount required in proportion to the unimproved capital value of that portion of the ratable land in each of them, which is situated within the district. If funds are voted by Parliament, six half-yearly subsidies are to be paid to County Councils as follows:—For the first and second half-years, £1 for every £1 of revenue collected for the destruction of aquatic pests; for the third and fourth half-years respectively, 15s.; for the fifth and sixth, 10s.

At the end of the year 1921, three districts had been established, viz.:—St. George, Clarence River, and Richmond River.

#### *St. George County Council.*

The St. George Council includes the municipalities of Bexley, Hurstville, Kogarah, and Rockdale, and was formed for the purpose of constructing an electric lighting service. The scheme is still in its preliminary stages, and

trading operations had not been fully completed at the 31st December, 1922, but the works were formally started in March, 1923. The following statement shows the transactions in 1921 :—

Particulars.				Amount.	
Revenue Account—				£	£
Expenditure—Promotion expenses	...	...	...	...	1,523
Income—					
Contributions by Councils	...	...	...	900	...
Sales of specifications	...	...	...	87	...
Contractors Deposits	...	...	...	100	1,087
Debit Balance	...	...	...	...	436
Balance Sheet—					
Liabilities—Sundry creditors	...	...	...	...	656
Assets—Bank Balance	...	...	...	...	220
Excess of Liabilities	...	...	...	...	436

#### *Richmond River County Council.*

This Council, which consists of the municipalities of Ballina, Casino, Coraki, and Lismore, and the shires of Byron, Copmanhurst (part only) Gundurimba, Kyogle, Terania, Tintenbar, Tomki, and Woodburn, was established for the eradication of the water hyacinth pest, and its operations have been very successful, but no details of the financial aspect are at present available.

#### *Clarence River County Council.*

Another county district council was incorporated by the amalgamation of the municipalities of Grafton, South Grafton, and Ullmarra, and the shires of Copmanhurst (part only), Nymboida, and Orara. The principal object of its establishment was for the purpose of carrying out the Nymboida hydro-electric scheme, and preparations have been made to proceed with the works.

A number of other proposals for combined councils have been contemplated, but they have not yet been definitely arranged.

#### BOARDS AND TRUSTS.

In addition to the ordinary forms of municipal local government, there are various boards and trusts with local jurisdiction. The control of the water supply and sewerage of the Metropolitan and Hunter districts is placed under separate Boards. The Metropolitan and the Country Towns Water Supply and Sewerage Acts, the Fire Brigades Act, the Sydney Harbour Trust Act, the Metropolitan Traffic Act, and the Motor Traffic Act, were all passed with the object of extending the principle of local government, and Boards have been established to carry out the provisions of some of these Acts.

The Metropolitan Board of Water Supply and Sewerage was established in 1887, the Hunter District Board in 1892, and the Sydney Harbour Trust in the year 1900.

In 1900 the Metropolitan Traffic Act was passed, which gives the complete control of street traffic and the licensing of public vehicles, drivers, and conductors to the Inspector-General of Police, and the Motor Traffic Act of 1909 places the supervision of motor vehicles under the same authority. Further information regarding licenses and fees is published in the chapter of this Year Book treating of "Police and Prison Services."

## BOARD OF FIRE COMMISSIONERS.

The Fire Brigades Act, 1909, provides for the establishment of a Board consisting of a president appointed by the Government, two members elected by the municipalities and shires specified in the schedules of the Act, one elected by the insurance companies, and one by the volunteer fire brigades, the four last mentioned holding office for three years. The Act applies to the City of Sydney, to forty-seven Metropolitan municipalities, to eighty-five country municipalities, and to parts of twelve shires. Other districts may be included, by proclamation, and at the end of 1921 the districts embracing the municipalities and shires numbered eighty-five.

The equipment includes thirty-three permanent and thirty-three volunteer stations in the metropolitan area (of which five permanent stations are within the boundaries of the City of Sydney), and 102 brigades in the country or extra-metropolitan divisions of New South Wales.

The Board exercises control in regard to fire prevention in declared districts, and may recover charges for attendance at fires outside such districts. It is also charged with the establishment and maintenance of permanent fire brigades, and the authorisation and subsidising of volunteer bodies. Funds are raised by contributions of one-third individually of the estimated requirements for each district, by insurance companies, by municipalities, and by the Government; and a *pro rata* contribution is charged against each owner of property assured in any company which is not registered within the State. To ensure efficient operation of these provisions, periodical returns are required from municipalities, insurance companies, and property owners.

The following table shows the revenue account and balance-sheet of the Board of Fire Commissioners for the year ended the 31st December, 1921 :—

Revenue.			Expenditure.		
	£			£	
Balance from 1920 ... ..	3,684		Administration ... ..	10,558	
Subsidy from Government ...	73,645		Salaries and Payments to Volunteers ... ..	122,443	
Subsidy from Municipalities and Shires ... ..	73,645		Repairs to Buildings, Plant, and other expenses ... ..	58,625	
Subsidy from Fire Insurance Companies and Firms ... ..	73,645		Equipment and Property Charges	27,676	
Other Sources ... ..	7,749		Balance ... ..	13,066	
Total ... ..	£232,368		Total ... ..	£232,368	

Liabilities.			Assets.		
	£			£	
Fund Account ... ..	48,915		Land and Buildings ... ..	178,614	
Reserves, and Trust Accounts ...	2,218		Plant Account and Fire Appliances	106,150	
Debentures and Accrued Interest	101,500		Stocks on Hand ... ..	18,574	
Revenue and Expenditure Account	13,066		Petty Cash Account ... ..	159	
Property and Equipment Fund ...	137,744		Commercial Banking Co. of Sydney ... ..	1,665	
Administration Account ... ..	1,719				
Total ... ..	£305,162		Total ... ..	£305,162	

The estimates of revenue adopted by the Board for 1922 amounted to £220,935, being £162,174 for the Sydney District, and £58,761 for the Country

Districts. For the municipalities and shires in the Sydney Fire District, the ratio of contributions to the assessed annual value was 7s. 9d. per £100 in 1921, as compared with 6s. 1d. in 1917.

Under the Act, the subsidies payable by insurance companies are proportionate to the annual premiums received or due; and in 1921 a sum of £73,105 was received from 100 insurance companies, in addition to which contributions amounting to £540 were received from 63 individual firms, who insured goods with companies not registered in New South Wales. The contributions to the Sydney Fire District in 1921 represented £5 18s. 5d. per £100 of premiums, and in the remaining districts the percentage ranged from £1 17s. 9d. to £16 5s. 7d.

#### METROPOLITAN BOARD OF WATER SUPPLY AND SEWERAGE.

In March, 1888, the Government passed an Act establishing a Board of Administration, under the title of the Metropolitan Board of Water Supply and Sewerage, to regulate the water supply and sewerage services in the county of Cumberland, including those under the control of the City Council. The management of the water service was transferred to the Board in May, 1888, and of the sewerage in September, 1889. The total length of water mains taken over was 355 miles; of sewers, 70½ miles; and on 30th June, 1922, these had increased to 3,000 miles and 1,227 miles respectively, while there were also 64 miles of storm-water drains.

The Board consists of seven members, three of whom are appointed by the Government, two by the City Council, and two by the suburban and country municipalities within the county of Cumberland supplied with water. The Board is subject to the general control of the Minister for Works—a provision considered necessary, as the Government advances the whole of the money for the construction of the works, the amount so advanced constituting part of the public debt of the State.

#### METROPOLITAN WATER SUPPLY.

As early as 1850 authority was given by the Legislative Council to the City Corporation for the construction of water and sewerage works, and a system of water supply from the Lachlan, Bunnerong, and Botany Swamps was adopted. This service has since been superseded by the Upper Nepean system.

The sources of supply under the existing system are the waters of the Nepean, Cataract, and Cordeaux Rivers, draining an area of 347 square miles, a catchment enjoying a copious and regular rainfall. The water flows by means of tunnel, open canal, and wrought-iron aqueducts to Prospect Reservoir, which has an area of 1,266 acres and a capacity of 11,029,000,000 gallons.

Notwithstanding the size of this reservoir, it was found that the supply was not sufficient for the growing needs of the Metropolis, and the Cataract Dam was constructed, the catchment area above the dam being about 50 square miles. The water flows from this dam down the Cataract River to a weir at Broughton's Pass, where it enters a tunnel previously existing, and is conveyed by a system of open canals to the Prospect Reservoir. The total distance from Cataract to Sydney, *via* Prospect, is 66½ miles.

Further contracts have been made especially with regard to the completion of the Cordeaux and other dams, and extensions and duplications of existing mains, which will considerably benefit the existing supplies, especially the Western Suburbs and Manly systems, and in the last mentioned suburb the capacity of the dam was increased to 428 million gallons during the year.

The dimensions of the Prospect and Cataract reservoirs are as in the following statement:—

Dam.			Height above Sea-level.	Area.	Capacity.	Length of Dam.	Width at top.	Height.
			ft.	acres.	gallons.	ft.	ft.	ft.
Prospect	...	...	196·7	1,266½	11,029,180,000*	7,300	30	85½
Cataract	...	...	950	2,200	20,743,196,475	811	16½	160

\* When full, about half this quantity is available by gravitation.

A full description of the reservoirs, pumping stations, and mains in the reticulated area was given in 1921 issue of this Year Book.

The following statement shows the number of houses in the Metropolitan area supplied with water in 1911, 1916, and during the last five years.

Year ended 30th June.	Houses Supplied.	Average Daily Supply.	Total Supply for Year.	Average Daily Supply.	
				Per House.	Per head of population supplied.
	No.	gallons.	gallons.	gallons.	gallons.
1911	139,237	29,006,700	10,587,434,000	208	41·7
1916	183,598	39,380,000	14,374,000,000	214	42·9
1918	196,685	41,358,989	15,096,031,000	208	41·6
1919	204,308	45,557,101	16,628,342,000	223	44·6
1920	212,046	48,021,243	17,527,754,000	226	45·3
1921	221,886	48,496,033	17,701,000,000	218	43·7
1922	229,274	51,004,417	18,616,612,300	222	44·5

From 1910 to 1917 inclusive, the water rate levied on the assessed annual value was 6d. in the £ and the meter charges were 11d. per 1,000 gallons up to 10,000,000, 10d. from 10 to 20 millions, and 9d. over 20 millions s. During 1918 the first-mentioned rate was increased to 6½d., but the meter charges were not altered. During 1919 a further increase of 1d. in each case was imposed, and in 1920 the rate was still further increased to 9d. in the £ on the assessed annual value, and the charge per meter to 13d. per 1,000 gallons, which were the amounts levied in 1922. The revenue from the Water Service Branch during the year ended 30th June, 1922, was £923,798, and the expenditure, including interest on capital, £919,367. The net revenue showed a return of 5·10 per cent. on the capital debt of £11,120,857.



The following statement gives the financial transactions of the Metropolitan Water Supply in 1911, 1916, and in each of the last five years; during those five years the Richmond and the Wollongong water supply systems are included.

Year ended 30th June.	Capital cost.	Revenue.	Working expenditure.	Interest.	Net return after paying working expenses.	Net profit after paying working expenses and interest.
	£	£	£	£	per cent.	£
1911	5,420,813	299,442	99,355	192,486	3·69	7,601
1916	7,192,472	470,744	165,210	261,335	4·24	44,199
1918	8,472,700	523,979	195,448	343,716	3·87	15,185*
1919	8,900,391	627,287	219,322	377,886	4·58	30,079
1920	9,584,723	664,975	291,618	433,171	3·89	59,814*
1921	10,323,252	855,751	347,298	473,890	4·92	34,563
1922	11,130,857	923,798	376,203	543,164	5·10	4,431

\* Loss.

#### THE HUNTER DISTRICT WATER SUPPLY.

The water supply works of the Lower Hunter were constructed by the Government under the provisions of the Country Towns Water Supply and Sewerage Act of 1880. In 1892, under the authority of a special Act, a Board was established on similar lines to those of the Metropolitan Water and Sewerage Board, the number of members being the same—three being nominated by the Governor, one elected by the Municipal Council of Newcastle, two by the adjacent municipalities, and one by the municipalities of East and West Maitland and Morpeth.

The supply of water for the district is pumped from the Hunter River, about a mile and a half up stream from the Belmore Bridge, West Maitland, and the pumping engines are situated above flood-level, on a hill about 44 chains from the river. The filtered water is pumped from the clear-water tank into two summit reservoirs, one at Rutherford and one at Buttai. The former, with a capacity of 500,000 gallons, supplies East Maitland, West Maitland, Morpeth, Lorn, Bolwarra, Campbell's Hill, Rutherford, and neighbouring places. Buttai Reservoir has a capacity of 1,150,000 gallons, and supplies Newcastle and environs. Fifteen district reservoirs, which are supplied from Buttai, eleven by gravitation, and four by repumping, receive water for distribution.

The present system is being augmented by the construction of a dam of 5,000,000 gallons capacity on the Chichester River at a point about 60 miles north from Newcastle. The completion of these works will assure to the people of Newcastle and district an ample supply of water of excellent quality for many years to come. The length of the mains when the Board was established was 106 miles; at 30th June, 1922, it had been increased to 464 miles.

Particulars relating to the water supply of the Board for 1911, 1916, and the past five years are given below. A water rate of 10d. in the £ is payable

on the assessed annual value of all properties over £12, but if valued at less than £12, the rate is 10s. per annum. The charge by meter is 2s. per 1,000 gallons and extra charges are made for water used for other than domestic purposes, the rates on which services range from 10s. to 40s. per annum.

Year ended 30th June.	Properties Supplied.	Supply.		Average Daily Supply.	
		Daily average.	Total.	Per Property.	Per Head.
	No.	gallons.	thousand gallons.	gallons.	gallons.
1911	17,164	1 949,900	675,214	108	21·5
1916	22,056	3,507,500	1,283,754	159	31·8
1918	23,257	3,442,816	1,256,628	148	29·6
1919	24,079	4,065,223	1,483,807	169	33·8
1920	24,864	4,319,414	1,580,906	174	34·7
1921	25,874	4,688,183	1,711,187	181	36·0
1922	26,758	4,626,129	1,688,537	173	34·5

The funds necessary for the maintenance and management of the water supply and sewerage services, as well as the sum required to pay interest on the capital debt, are obtained by rates levied on the properties situated in the districts benefited by the systems. The valuations adopted by the Municipal Councils are generally accepted by the Boards as the values on which to strike their special rates. In cases of heavy consumption of water, a charge is made according to the quantity used; but fixed charges are imposed for the use of water in certain trades and callings, for gardens, and for animals. The following table shows the financial position for 1911, 1916, and the last five years:—

Year ended 30th June.	Estimated Capital Debt.	Revenue.	Expenditure.*	Return on Estimated Capital Debt.
	£	£	£	per cent.
1911	495,747	45,711	45,420	3·55
1916	634,265	79,507	58,321	6·75
1918	832,064	80,607	69,933	4·43
1919	939,685	91,204	76,297	4·76
1920	1,045,504	97,469	88,488	3·93
1921	1,472,074	116,320	106,194	3·10
1922	1,953,411	113,217	114,522	1·93

\* Including Interest and Instalments to Sinking Funds for Renewal of Works.

#### METROPOLITAN SEWERAGE WORKS.

The first sewerage works at Sydney were begun in 1853, and in 1889, the date of transfer to the Board, there were 70½ miles of old city sewers in existence, discharging street-surface water and sewage into the harbour.

The pollution of the waters led to the appointment of a Commission of Inquiry, and the result was the adoption of the present system.

This system consists of three main outfalls—the northern, discharging into the Pacific Ocean near Bondi, and the southern and western discharging into the sewage farm at Webb's Grant, near Botany Bay.

A complete description of the systems appeared in the 1921 issue of this volume.

The length of sewers in the Metropolitan District and the houses served during 1911, 1916, and the last five years are shown below :—

Year ended 30th June.	Houses connected.	Length of Sewers.	Length of Storm-water Drains.	Length of Ventilating Shafts.	Length of Sewers Ventilated.
	No.	miles.	miles.	feet.	miles.
1911	108,012	825.20	48.85	376,900	795
1916	130,638	1,022.19	54.08	443,134	953
1918	139,777	1,113.34	60.07	479,464	1,039
1919	141,793	1,131.72	60.11	484,798	1,052
1920	145,304	1,161.94	63.73	503,362	1,096
1921	148,923	1,196.96	63.73	514,336	1,122
1922	153,789	1,226.96	63.73	527,766	1,162

The following statement of financial transactions relates to Metropolitan Sewerage during 1911, 1916, and the last five years :—

Year ended 30th June.	Capital cost.	Revenue.	Working expendi- ture.	Interest.	Net return after paying working expenses.	Net profit(+) or loss (-) after paying working expenses and interest.
	£	£	£	£	per cent.	£
1911	4,496,290	234,208	79,636	159,070	3.43	(-) 4,498
1916	6,114,072	363,799	120,244	224,551	3.98	(÷) 19,004
1918	6,870,927	429,668	147,444	283,661	4.10	(-) 1,437
1919	6,963,573	497,406	151,951	291,346	4.96	(+) 54,169
1920	7,124,813	512,621	202,360	328,239	4.39	(-) 17,978
1921	7,329,632	615,615	229,441	341,675	5.26	(+) 44,499
1922	7,553,906	683,434	244,916	373,671	5.94	(+) 64,847

The sewerage rate for the city of Sydney and the eastern suburbs up to 1903 was 7d. in the £ on the assessed annual value, the northern and the western suburbs being rated at 1s., but in 1904 a uniform rate of 11d. was imposed. In 1907 it was reduced to 10d. in the £, and in 1908 to 9½d., the latter being the rate ruling up to the 30th June, 1917; on the 1st July, 1917, it was increased to 10d., and a further increase to 11d. was made on 1st July, 1918, and this rate continued during 1919, but from the 1st July, 1920, the amount levied was 12d., at which it now remains. In addition to the sewerage rate already mentioned, storm-water drainage rates are imposed in certain proclaimed areas, the amounts ranging from ½d. to 7d. in the £ on the assessed annual value.

#### NEWCASTLE AND SUBURBS SEWERAGE WORKS.

The sewerage scheme for the Hunter District has its outfall at Merewether Gulf, some distance south from Newcastle. The districts served so far are Newcastle, Adamstown, Hamilton, Lambton, New Lambton, Merewether, Waratah, and Wickham. The following table shows information relating

to sewers under the control of the Board in 1911, 1916, and during the last five years :—

Year ended 30th June.	Properties connected.	Length of Sewers.	Year ended 30th June.	Properties connected.	Length of Sewers.
	No.	miles.		No.	miles.
1911	1,465	29.9	1920	11,338	132.9
1916	7,240	83.8	1921	12,218	147.5
1918	9,333	117.5	1922	13,416	157.0
1919	10,365	123.0			

The particulars of cost, revenue, and expenditure in the same years are shown below :—

Year ended 30th June.	Capital cost— interest- bearing.	Revenue.	Working expendi- ture (including Sinking Fund).	Interest.	Net return after paying working expenses.	Net profit (+) or loss (—) after paying working expenses and interest.
	£	£	£	£	per cent.	£
1911	170,151	8,975	4,217	2,902	2.79	(+) 1,856
1916	411,332	18,582	9,820	11,623	2.13	(—) 5,155
1918	475,239	24,215	13,866	18,831	2.17	(—) 8,482
1919	514,953	26,721	14,607	20,383	2.35	(—) 8,269
1920	553,836	28,050	17,683	22,943	1.87	(—) 12,576
1921	590,790	32,164	21,256	25,328	1.84	(—) 14,420
1922	613,249	39,477	24,645	28,664	2.42	(—) 13,832

The sewerage rate of 1s. in the £ on the annual rental value came into force on 1st January, 1909, and this was the rate ruling in 1922.

#### WATER AND SEWERAGE SERVICES.

The position of the combined Water and Sewerage services of the Metropolitan and of the Hunter Districts for the five years ended 30th June, 1922, are shown below. The figures for the Metropolitan District include the Richmond and the Wollongong water supply systems, the accounts of which were both formerly kept separate, and the working expenses for the Hunter District include the instalment paid to Sinking Fund for reconstruction of renewable works.

Year ended 30th June.	Capital Cost.	Revenue.	Working Expenses.	Interest on Capital.	Net return after paying working expenses.	Net profit after paying working expenses and interest.
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#### Metropolitan District.

	£	£	£	£	per cent.	£
1918	15,343,627	953,648	342,892	627,377	3.98	(—) 16,621
1919	15,863,964	1,124,693	371,273	669,232	4.75	84,818
1920	16,709,536	1,177,596	493,978	761,410	4.09	(—) 77,792
1921	17,662,884	1,471,366	576,739	815,565	5.07	79,062
1922	18,684,763	1,607,232	621,119	916,835	5.28	69,278

#### Hunter District.

	£	£	£	£		£
1918	1,307,303	104,822	57,611	45,019	3.61	2,192
1919	1,454,638	117,925	61,099	50,188	3.91	6,638
1920	1,599,340	125,519	73,554	55,560	3.25	(—) 3,595
1921	2,062,864	148,484	91,894	60,884	2.74	(—) 4,294
1922	2,566,660	152,694	99,162	68,669	2.68	(—) 15,137

(—) Denotes net loss.

## GRAFTON AND SOUTH GRAFTON WATER BOARD.

The Grafton and South Grafton Water Board was constituted in 1918, and although administered by the Municipalities of Grafton and South Grafton, its accounts are kept separate. During the year ended 31st December, 1921, the expenditure of the Board amounted to £4,316, of which £3,244 were interest payable on the capital debt to the Government, and the income amounted to £5,703, showing a profit of £1,387. The capital debt at the end of the year was £80,995, against which the Board held assets to the value of £87,888, other liabilities amounted to £86, making a total liability of £81,081. It will thus be seen that there was an excess of assets of £6,807.

## ROADS, BRIDGES, AND FERRIES.

Main roads in New South Wales were first formed to connect the towns of Parramatta, Liverpool, Windsor, and Penrith with Sydney. All access to the interior of the country was considered barred by the apparently insurmountable sandstone precipices rising on the farther side of the Nepean, and until the year 1813 no effort to cross the mountains was attended with success. In that year Blaxland, Lawson, and Wentworth succeeded in crossing the range, and discovered the rich pastures of the Bathurst Plains. Shortly after their return the construction of a track was begun, and the Great Western road was completed as far as Bathurst on 21st January, 1815.

The access to the fertile lands surrounding Bathurst, by means of this mountain road, gave such an impetus to settlement that it was found impossible to keep pace in the matter of road-making with the demands of the settlers. The authorities, therefore, for many years confined their attention to the maintenance of roads already constructed, and extended them in the direction of the principal centres of settlement. Had the progress of settlement subsequent to 1850 been as slow as that of the preceding years, this system would have sufficed; such, however, was not the case. The discovery of gold completely altered the circumstances, and during the period of excitement and change which followed, so many new roads were opened, and traffic increased to such an extent, that the general condition of the public highways was by no means good. The modern system of road-making may be said to have begun in the year 1857, consequent on the creation of the Roads Department: it was not, however, until 1864 that the whole of the roads, both main and subordinate, received consideration by the Government.

The principal main roads are:—

Northern Road—length, 405 miles, from Morpeth to Maryland, on the Queensland border.

Western Road—length, 513 miles, from Sydney, through Bathurst, and many other important townships, to the Darling River, at Bourke.

Southern Road—length, 385 miles, from Sydney, through Goulburn, and other important townships to the Murray River to Albury.

South Coast Road—length, 250 miles from Campbelltown, through Coal Cliff, and along the South Coast generally, as far as Bega, whence it extends as a minor road to the southern limits of the State.

The roads have not so great an importance as they possessed before the opening of the railways, which for the greater part follow the direction of the main roads, and attract nearly all the through traffic. Thus many roads on which heavy expenditure has taken place have been more or less

super seded, and the opening of new roads has been rendered necessary to act as feeders to the railways from outlying districts.

#### *Control of Roads and Bridges.*

Prior to 1906, when the Local Government Act came into effect, the State was divided into road districts, each of which was placed under the supervision of an officer directly responsible to the Commissioner for Roads. These officers had under their care the greater part of the roads and bridges of the State outside the incorporated areas, as well as a portion of those within such limits. The road trusts had the supervision of the expenditure of certain grants for the maintenance of roads in districts chiefly of minor importance, as well as some important roads in the vicinity of the Metropolis.

The administration of the works under the control of the Roads and Bridges Department (with the exception of those in the unincorporated areas of the Western Division, and certain bridges and ferries proclaimed as "national works") was transferred by the operation of the Local Government Act to the shires and municipal councils.

The Act authorises payments by way of endowment to municipalities and shires, the minimum endowment payable to shires being fixed at £150,000 per annum, to be distributed in accordance with a classification made every third year. The Minister may withhold payment of endowment from a council if his requirements in respect of main roads are not satisfied.

Between 1906 and 1912 the amount of endowment allotted to shires rose from £150,000 to £330,000 approximately, but the expenditure on the important roadways has not been sufficient to maintain them in a serviceable condition. It was decided, therefore, to amend the conditions under which Government assistance is granted, by reducing the amount of general endowment, and distributing an additional sum as a special endowment for the upkeep of the main roads.

#### *Length of Roads.*

The length of roads under Government control on 30th June, 1906, prior to the transfer to the councils, was 48,311 miles, while 195 miles were under the care of road trusts, and 1,338 miles within the municipal areas were subsidised by the Government, making a total of 49,844 miles. There were also about 8,000 miles of roads and streets belonging to the municipal councils. Since 1906, statistics of roads, streets, bridges, and public ferries have been collected triennially, the date of the latest available returns being 1921. In that year the length of roads in the State was, approximately, 101,698 miles, of which 58 miles were controlled by the Government, 10,187 miles by the municipalities, 85,458 miles by the shires, and 5,995 miles were in the unincorporated areas of the Western Division. The nature of these roads may be seen in the following statement:—

Divisions.	Mettled, Gravelled, Ballasted, &c.	Formed only.	Cleared only.	Natural surface.	Total.
	miles.	miles.	miles.	miles.	miles.
National ... ..	40	16	2	...	58
Municipalities ... ..	4,474	1,912	2,162	1,639	10,187
Shires ... ..	17,216	12,200	26,538	29,504	85,458
Western Division ... ..	173	147	3,435	2,240	5,995
<b>Total ... ..</b>	<b>21,903</b>	<b>14,275</b>	<b>32,137</b>	<b>33,383</b>	<b>101,698</b>

*Bridges and Ferries.*

Many of the earliest bridges erected in the State were built of stone, and are still in existence. Those erected in the period following the extension of settlement to the interior were principally of timber, and have since been replaced after an average life of about twenty-five years. Nearly all the large bridges of recent date are of iron and steel, and some of them have been erected under difficult engineering conditions, owing to the peculiarity of the river flow in certain parts of the country. The Councils are now empowered to control these bridges, with the exception of those classified as National works, which may be transferred by the Government at any time to the Council.

On 1st January, 1907, the bridges of 20 feet span and over, including those in course of construction, numbered 3,575. Of these, 256 bridges, with an aggregate length of 101,416 feet, which, by reason of their cost, size, and extra-local importance, constitute a strain on the resources of the local councils, were proclaimed as "national works," to be maintained by the Government.

Where local conditions and limited traffic have not favoured the erection of a bridge, a punt or ferry has been introduced. The most important ferries which are worked otherwise than by hand, have been proclaimed as national services. Prior to 1st December, 1907, it was the practice to charge a small fee for ferry transit; but on that date tolls were abolished, and public ferries are now free.

The particulars of the bridges, culverts, and ferries of the State as at 30th June, 1922, are shown below:—

Classification.	Bridges over 20 feet span.		Culverts.		Ferries.
	Number.	Length.	Number.	Length.	Number.
		ft.		ft.	
National Works ... ..	283	108,631	...	...	23
Municipalities ... ..	745	41,262	4,667	243,894	26
Shires ... ..	3,627	223,126	35,287	341,770	175
Western Division (unincorporated)	99	13,602	340	4,573	6
Total ... ..	4,754	386,621	40,294	590,237	230

*Government Expenditure on Roads, Bridges, etc.*

Although the main roads have been superseded largely by the railways, they are still the sole means of communication throughout a large part of the interior, and serve as valuable feeders to the railway system. No revenue is derived directly from roads, but their indirect advantages to the country are very great.

In view of the transfer of the administration of roads and bridges, with the exception of those noted previously, from State to local government control, the following return will be of interest. It shows the Government

expenditure on works of a local character, such as roads, bridges, punts, ferries, public watering-places, etc., in various periods from 1905 to 1922.

Year ended 30th June.	Expenditure on Services.	Endowments and Grants, including Main Roads.			Total Expenditure.
		Shires.	Municipali- ties.	Total.	
	£	£	£	£	£
1905	495,672	...	7,048	7,048	502,720
1915	175,726	288,053	40,314	328,367	504,093
1920	160,679	296,511	56,366	352,877	513,556
1921	212,407	316,180	108,353	424,533	636,940
1922	555,940	318,710	85,824	434,534	990,474

#### PARKS AND RECREATION RESERVES.

It has always been the policy of the State to provide the residents of municipalities and shires with parks and reserves for public recreation. The city of Sydney contains within its boundaries a large extent of parks, squares, and public gardens, and suburban municipalities also are well served.

Full details regarding parks and recreation reserves in the city and suburbs of Sydney will be found in the part "Social Condition" of this volume.

In country districts, reserves have been proclaimed as temporary commons, and considerable areas have been dedicated from time to time as permanent commons attached to inland townships, which are otherwise well provided with parks and reserves within their boundaries.



## MANUFACTURING INDUSTRY

NEW SOUTH WALES cannot yet be considered an important manufacturing country; nevertheless, its secondary industries are growing rapidly in importance. More than £67,000,000 have been invested in land, buildings, plant, &c., and employment is given to 149,000 persons. Most of the industries are concerned with the manufacture of articles required to house, feed, and clothe the community. Of manufacture for export, in the ordinary meaning of the term, there is very little, except of food commodities, leather, and small quantities of boots and shoes, tobacco, rubber goods, metals, and wool-tops.

The following table is a summary of the important facts relating to the establishments in New South Wales which came within the definition of a factory and furnished returns in 1901, 1911, and in the two years ended 30th June, 1921 and 1922.

Particulars.	1901.*	1911.	1920-21.	1921-22.
Number of Establishments ...	3,367	5,039	5,837	6,256
Number of Employees ... { Male ...	54,556	82,083	112,187	112,362
... { Female ...	11,674	26,541	32,824	36,514
... { Total ...	66,230	108,624	145,011	148,876
Salaries and Wages paid to Employees.† { Male £	‡	8,917,583	22,766,216	23,466,566
... { Female £	‡	1,130,079	2,852,375	3,316,676
... { Total £	4,952,000	10,047,662	25,618,591	26,783,242
Capital invested in Land, Buildings, and Fixtures (owned and rented) £	7,838,628	13,140,207	28,428,917	32,052,303
Value of Plant and Machinery... £	5,850,725	12,510,600	31,115,444	35,229,530
Machinery—Average Horse-power in use ... h.p.	44,265	127,547	208,463	217,432
Value of Materials and Fuel used £	15,637,611	34,913,564	94,713,249	86,074,126
Value added to Raw Materials in process of Manufacture ... £	10,010,860	19,432,447	43,128,137	46,745,939
Total Value of Output ... £	25,648,471	54,346,011	137,841,386	132,820,065
Average per Factory—				
Employees ... No.	19.7	21.6	24.8	23.4
Horse-power of Machinery ... h.p.	13.2	25.3	35.7	34.2
Land and Buildings ... £	2,328	2,608	4,870	5,043
Plant and Machinery... £	1,740	2,483	5,331	5,543
Material and Fuel ... £	4,644	6,928	16,226	13,542
Value added in process of Manufacture ... £	2,973	3,856	7,389	7,353
Total Output ... £	7,617	10,784	23,615	20,895
Average per Employee—				
Time Worked ... months	11.32	11.55	11.52	11.53
Salaries and Wages † ... { Male £	‡	114	211	218
... { Female £	‡	43	88	92
... { Total £	81	96	182	186
Value of Materials and Fuel... £	236	321	653	578
Value added in Manufacture... £	151	179	298	314
Total Output ... £	387	500	951	892

\* Excluding a number of small establishments in country districts (see Year Book, 1907-8, page 448).

† Excluding drawings of working proprietors.

‡ Information not available.

Returns relating to the manufacturing industry are collected annually under the authority of the Census Act, 1901, and must be furnished by every proprietor of a factory. The returns are used for statistical purposes only, and may not be produced in any court of law even under subpoena.

Prior to 1896 there was no uniformity in the method of collection in the various States, but in that year uniformity was secured with Victoria by agreement between the Statisticians. A standard classification of factories was adopted at a conference of statisticians in 1902, and the statistics for all the States have since been compiled on the same basis.

The foregoing statement shows that the number of establishments has increased since 1901 by 89 per cent., and the number of employees by over 124 per cent. In 1901 the value of capital invested in land, buildings, fixtures plant, and machinery amounted to £13,699,353, and in 1921-22 it had increased to £67,281,833, or by over 391 per cent. The value of the output was considerably more than five times as great as in 1901; but this is due largely to the increase in the values of commodities during recent years. Side by side with this development the amount paid in wages increased by 441 per cent., and the expenditure on materials and fuel by 450 per cent.

The table provides a comparison over a period of twenty-one years, during which very great progress was made in the secondary industries of the State. It is interesting to compare the first and second periods of ten years. Between 1901 (the year in which the Australian States were federated) and 1911 the number of establishments increased by about 1,600, compared with 798 between 1911 and 1921; the size of establishments, however, grew appreciably faster in the latter period than in the former. The average number of employees per factory was 25 per cent. greater in 1921 than in 1901, the horse-power of machinery per factory 170 per cent. greater, and the value of output per employee was more than twice as great, although in regard to the last the great increase in prices must be considered. Between 1901 and 1911 the number of employees increased by 41,000, as against 36,000 between 1911 and 1921, and the average annual wages paid per employee rose from £81 in 1901 to £96 in 1911, and to £186 in 1921-22. Allowing for the great rise in values, it is apparent that a rather greater proportionate increase occurred in the amount of capital invested in the first period than in the second, and the same remark applies to the value of manufacturing work done.

All things considered, the second period of ten years was slower in development in secondary industries than the previous decade. The rapid growth which occurred between 1906 and 1911 was not maintained during the next quinquennium, and though war conditions provided an especially favourable period for development in local manufactories, the exigencies of the period, particularly in regard to obtaining supplies of suitable labour and machinery, impeded progress.

#### GOVERNMENT AND PRIVATE WORKSHOPS AND FACTORIES.

Until ten years ago, the establishments under Government control consisted almost entirely of railway workshops, dockyards, and other establishments engaged principally in the repair or renovation rather than in the actual manufacture of articles. Now, however, there are State factories producing such diverse articles as bricks and clothes. A complete statement of the operations of State industrial undertakings is given in the section of this Year Book which deals with Public Finance, and the following table has been prepared to show the details of the operations of the State and Commonwealth

industrial undertakings in 1921-22, in comparison with those of other establishments :—

				Governmental.	Other.	Total.
Number of Establishments†	...	...	...	72	6,284	6,356
Number of Employees	{	Male	...	16,516	95,846	112,362
		Female	...	706	35,808	36,514
		Total	...	17,222	131,654	148,876
Salaries and Wages paid to Employees.*	{	Male	...	£ 3,994,674	19,471,892	23,466,566
		Female	...	£ 48,995	3,267,681	3,316,676
		Total	...	£ 4,043,669	22,739,573	26,783,242
Capital invested in Land, Buildings, and Fixtures, owned by occupier	...	...	...	£ 3,874,457	17,741,086	21,615,543
Rent paid	...	...	...	£ 934	694,850	695,784
Value of Plant and Machinery	...	...	...	£ 4,609,649	30,619,881	35,229,530
Machinery—Average Horse-power in use...	...	...	...	73,265	266,519	239,784
Value of Materials and Fuel used	...	...	...	£ 3,338,353	82,735,773	86,074,126
Value added to Raw Materials in process of Manufacture...	...	...	...	£ 4,652,584	42,093,355	46,745,939
Total Value of Output	...	...	...	£ 7,090,937	124,829,128	132,820,065

\* Excluding drawings of working proprietors.

† In the above table each of the various railway workshops is counted as a separate establishment.

In making comparisons between the results shown by Governmental and by other establishments, it should be noted that in the former, repair work constitutes a large proportion of the work done; also that in such establishments the profit would appear in reducing the price of the product rather than in showing a large margin over cost.

#### CLASSIFICATION OF MANUFACTORIES.

The manufacturing industries have been arranged for purposes of reference and comparison into nineteen classes, in accordance with a standard classification adopted at a Conference of Statisticians.

The classes are as follow :—

**CLASS I.—TREATING RAW MATERIALS, THE PRODUCT OF AGRICULTURAL AND PASTORAL PURSUITS, ETC.**

Bolling-down Tallow, Refining, etc.  
Sausage Skins, etc.  
Tanneries.  
Wool-scouring, Fellmongering.  
Chaff-cutting, Corn-crushing, etc.

**CLASS II.—OILS AND FATS, ETC.**

Oil and Grease.  
Soap and Candles.

**CLASS III.—STONE, CLAY, GLASS, ETC.**

Bricks and Tiles.  
Glass (including Bottles).  
Glass (Ornamental).  
Lime, Plaster, Cement, and Asphalt.  
Marble, Slate, etc.  
Pottery and Earthenware (including Modelling, etc.

**CLASS IV.—WORKING IN WOOD.**

Boxes and Cases.  
Cooperage.  
Joinery.  
Saw-mills.  
Wood-turning, Wood-carving, etc.

**CLASS V.—METAL WORKS, MACHINERY, ETC.**

Agricultural Implements.  
Art Metal Works.  
Brass and Copper.  
Cutlery.  
Engineering.  
Galvanized Iron-working.  
Ironworks and Foundries.  
Railway Carriages, Rolling-stock, etc.  
Railway and Tramway Workshops.  
Smelting.  
Stoves and Ovens.  
Tinsmithing.  
Wire-working.  
Other Metal Works (including Nail and Lead Mills).

**CLASS VI.—FOOD AND DRINK, ETC.**

Bacon-curing.  
Butter Factories, Creameries, etc.  
Butterine and Margarine.  
Cheese Factories.  
Condensed Milk.  
Meat-preserving.  
Biscuits.  
Confectionery.  
Cornflour, Oatmeal, etc.  
Flour-mills.  
Jam and Fruit-canning.  
Pickles, Sauces, and Vinegar.  
Sugar Mills.  
Sugar Refining and Distilling.  
Aerated Waters, Cordials, etc.  
Breweries.  
Condiments, Coffee, Spices, etc.  
Ice and Refrigerating.  
Malting.  
Tobacco, Cigars, etc.

CLASSIFICATION OF MANUFACTORIES—*continued.*

CLASS VII.—CLOTHING, AND TEXTILE FABRICS, ETC. Woollen and Tweed Mills. Hosiery and Knitted Goods. Boots and Shoes. Clothing (Slop). Clothing (Tailoring). Clothing (Waterproof and Oil-skin). Dressmaking and Millinery (Makers' Material). Dressmaking and Millinery (Customers' Material). Dyeworks and Cleaning. Furriers. Hats and Caps. Shirts, Ties, and Scarfs. Rope and Cordage. Sailmaking. Tents and Tarpaulins.	CLASS X.—ARMS AND EXPLOSIVES. Arms and Explosives.  CLASS XI.—VEHICLES, SADDLERY, HARNESS, ETC. Coach and Wagon Building. Cycles and Motors. Perambulators. Saddlery, Harness, etc. Spokes, etc. Whips.	CLASS XV.—SURGICAL AND OTHER SCIENTIFIC INSTRUMENTS. Surgical, Optical, and other Scientific Instruments.  CLASS XVI.—JEWELLERY, TIME-PIECES, AND PLATED-WARE. Electro-plating. Manufacturing Jewellery, etc.  CLASS XVII.—HEAT, LIGHT, AND POWER. Coke-works. Electric Apparatus. Electric-light and Power. Gas-works and Kerosene. Lamps and Fittings, etc. Hydraulic Power.
CLASS VIII.—BOOKS, PAPER, PRINTING, ETC. Electrotyping and Stereotyping. Paper-making, Paper Boxes, Bags, etc. Photo-engraving. Printing and Binding.	CLASS XII.—SHIP AND BOAT BUILDING AND REPAIRING. Docks and Slips. Ship-building and Repairing.  CLASS XIII.—FURNITURE, BEDDING, ETC. Bedding, Flock, and Upholstery. Chair-making. Furnishing, Drapery, etc. Furniture and Cabinet-making, and Billiard Tables. Picture Frames. Window Blinds.	CLASS XVIII.—LEATHERWARE (N.E.I.). Leather Belting, Fancy Leather, Portmanteaux, and Bags.  CLASS XIX.—MINOR WARES (N.E.I.). Basket and Wickerware, Matting, etc. Brooms and Brushware. Rubber Goods. Toys. Umbrellas. Other Industries.
CLASS IX.—MUSICAL INSTRUMENTS, ETC. Musical Instruments and Sewing Machines.	CLASS XIV.—DRUGS AND CHEMICALS. Chemicals, Drugs, and Medicines. Paints and Varnishes. Inks, Polishes, etc. (including Fertilisers).	

The returns relate to establishments employing four or more than four persons engaged directly or indirectly in working at certain handicrafts, or in preparing or manufacturing articles for trade or sale, and to establishments employing less than four persons, where machinery, operated by steam, gas, electric, water, wind, or horse power is used. Establishments with less than four hands, where manual labour only is used do not furnish returns, with the exception of the following, from which returns are obtained in order that the total output of the various products may be ascertained, viz.:—Aerated water, bacon, butter and cheese factories, brick, gas, and lime works, quarries, soap and candle factories, tanneries and boot factories.

The term "establishments" includes branches which, whether conducted in separate buildings or not, deal with separate branches of industry, and are therefore counted as industrial entities.

The foregoing definition, based on the number of workers, applies uniformly to all other industries, and includes tailoring, bootmaking, dressmaking, and millinery establishments. It does not, however, cover shops engaged in retail trade only, and in the distribution or importation of goods; nor does it apply to bakeries, butcheries in which sausages and small-goods are made, laundries, and waterworks.

With the exception of blacksmiths' and wheelwrights' shops, the definition covers establishments in which workers are engaged in repairing or assembling manufactured parts of an article.

If a manufacturing business is conducted in conjunction with an importing or a retail business particulars relating to the manufacturing section only are obtained, and persons employed in the importing or retail branch of the business are not included. Where two or more industries are being conducted a return is furnished for each industry; if power from the same

generating plant is used for more than one industry it is distributed proportionately. The generation of electric light and power for use in other manufacturing operations, even if generated on the premises, is treated as an independent industry.

The value of production includes the products of educational, charitable, and reformatory or other public institutions, excluding penitentiaries.

#### MOTIVE POWER.

The power used for driving machinery in factories is derived almost entirely from steam. Other agencies, principally gas, are used only to a limited extent, and, although there are electric engines of considerable voltage, they are employed mainly for lighting and tramway purposes, and the generation of their power depends upon some other class of engine.

The following table shows the distribution of motive-power through the various agencies of steam, gas, electricity (generated by steam-power), water and oil, expressed in units of horse-power, for the first and second quinquennial periods and succeeding years since federation :—

Year.	Establishments using Machinery.	Horse-power of Machinery (Average used).						Average H.P. per Establishment.
		Steam.	Gas.	Electricity.	Water.	Oil.	Total ex-Electricity.	
1901	1,969	42,555	1,577	330	97	36	44,295	22
1906	2,496	70,192	4,212	8,989	75	277	74,756	30
1911	3,550	113,939	12,201	20,671	222	1,185	127,547	36
1912	3,775	130,479	16,028	26,652	273	1,181	147,961	39
1913	3,974	141,025	13,802	35,885	307	1,478	156,612	39
1914-15	3,987	158,718	14,552	50,179	283	1,885	175,438	44
1915-16	4,077	177,162	13,926	58,075	319	1,689	193,096	47
1916-17	4,272	159,712	13,312	61,702	274	1,830	175,128	41
1917-18	4,444	175,232	14,110	67,719	248	1,795	191,385	43
1918-19	4,451	181,611	14,227	74,567	63	1,935	197,836	44
1919-20	4,730	171,590	13,342	78,287	163	2,417	187,514	40
1920-21	5,032	192,816	13,242	103,846	24	2,381	208,463	41
1921-22	5,470	201,806	13,211	122,352	50	2,365	217,432	40

During the period under review the potential horse-power of the machinery in the State increased from 57,335 to 559,106; or exclusive of electric or secondarily-produced power, from 56,669 to 380,687. The development of electrical power is characteristic of the period, the full capacity of machinery so equipped advancing from 666 h.p. in 1901, to 178,419 h.p. in 1921-22. In all statements of the comparative horse-power of machinery it is, however, advisable to eliminate the electrical agency, as it is a reproduced or transmitted force originating from a primal source.

The actual average motive force, exclusive of electricity, employed in operating machinery, amounted in all the factories of the State, in 1901, to

44,265 h.p., and in 1921-22 to 217,432 h.p. The average horse-power per establishment increased from 22 to 40, or by 82 per cent. during the period.

Exclusive of electrical power the proportion of average motive force used in operating machinery to potential motive force was about 78 per cent. in 1901, and about 57 per cent. in 1921-22. Broadly speaking, the motive power of machinery is capable of supplying 70 per cent. more energy than that ordinarily operated.

#### ESTABLISHMENTS.

The following table shows the number of manufactories and works in the Metropolitan district and in the remainder of the State, together with the number of establishments in which machinery was installed :—

Year.	Metropolitan District.			Remainder of State.			New South Wales.		
	With Machinery.	Without Machinery.	Total.	With Machinery.	Without Machinery.	Total.	With Machinery.	Without Machinery.	Total.
1901	754	661	1,415	1,215	737	1,952	1,969	1,398	3,367
1906	1,136	635	1,771	1,360	730	2,090	2,496	1,365	3,861
1911	1,793	717	2,510	1,757	772	2,529	3,550	1,489	5,039
1912	1,964	686	2,650	1,811	701	2,512	3,775	1,387	5,162
1913	2,093	658	2,751	1,881	714	2,595	3,974	1,372	5,346
1914-5	2,154	709	2,863	1,832	573	2,405	3,986	1,282	5,268
1915-6	2,250	565	2,815	1,827	568	2,395	4,077	1,133	5,210
1916-7	2,416	589	3,005	1,856	495	2,351	4,272	1,084	5,356
1917-8	2,545	540	3,085	1,899	430	2,329	4,444	970	5,414
1918-9	2,575	578	3,153	1,876	431	2,307	4,451	1,009	5,460
1919-20	2,819	557	3,376	1,911	375	2,286	4,730	932	5,662
1920-21	2,987	536	3,523	2,015	299	2,314	5,002	835	5,837
1921-22	3,389	583	3,972	2,081	303	2,384	5,470	886	6,356

An excellent harbour and transport facilities have caused Sydney to be made the chief manufacturing centre of the State, but in some industries important works have been constructed in proximity to the coalfields at Newcastle and Lithgow. In the earliest days of the State's history, Sydney as the first place of settlement, was the sole manufacturing town in the territory; in 1901, after more than a century of colonisation, the Metropolitan area contained over 42 per cent. of the manufacturing establishments in the State, and in 1922 the proportion had increased to 62 per cent.

In the country districts manufacturing enterprises are occupied mainly with the direct handling of primary products, but, at Newcastle, there have been constructed very extensive iron and steel works, a galvanised-iron works, a large ship building yard, a large ore-treating plant, and a number of other factories. At Lithgow an iron and steel foundry and the Commonwealth small arms factory form the nucleus of growing secondary industries, and large works have been established at Port Kembla.

The most important group of secondary industries in the State consists of metal and machinery works, followed in order by clothing and textile factories, and those engaged in making articles of food and drink, and book, paper, and printing works. Most of the large textile and clothing factories are situated in the Metropolitan area, and about two-fifths of the work done in metal and machinery establishments is performed there. In country districts the order of precedence is much the same, metal works being most important, followed by food and drink, and wood-working establishments.

The following table shows the principal facts relating to each class of manufacturing industry conducted in the State and in the Metropolitan district during the year 1921-22 :

Class of Industry.	Establishments.	Average Number of Employees.			Average Time worked per Employee.	Horse-power of Machinery—Average used.	Value of Machinery, Tools, and Plant.	Total Salaries and Wages, exclusive of Drawings of Working Proprietors.
		Males.	Females.	Total.				
NEW SOUTH WALES.								
Treating Raw Materials, etc. ...	235	3,985	197	4,182	11-05	9,176	885,907	858,659
Oils, Fats, &c. ...	39	1,292	394	1,686	11-71	1,816	547,156	279,631
Processes in Stone, Clay, Glass, &c. ...	312	7,497	113	7,610	11-31	23,797	2,518,534	1,578,040
Working in Wood ...	792	8,860	163	9,023	10-89	19,491	1,251,549	1,622,924
Metal Works, Machinery, &c. ...	751	33,516	717	34,233	11-51	77,661	9,500,679	7,609,256
Connected with Food, Drink, &c. ...	888	13,445	5,665	19,110	11-15	35,827	6,262,806	3,303,147
Clothing, Textile Fabrics, &c. ...	1,305	9,389	22,647	32,036	11-77	8,607	1,487,170	3,833,428
Books, Paper, Printing, &c. ...	499	8,159	3,123	11,282	11-90	9,978	2,241,029	2,051,368
Musical Instruments, &c. ...	27	672	52	724	11-93	333	42,343	160,195
Arms and Explosives ...	4	606	6	612	12-00	775	54,935	154,641
Vehicles and Fittings, Saddlery, &c. ...	571	5,395	222	5,617	11-70	2,680	401,991	914,542
Ship and Boat-building, &c. ...	38	5,576	40	5,616	12-00	9,416	1,036,849	1,360,333
Furniture, Bedding, and Upholstery. ...	318	3,826	526	4,352	11-78	3,032	203,217	732,327
Drugs, Chemicals, and By-products. ...	136	1,806	1,003	2,809	11-76	3,386	721,595	493,153
Surgical and other Scientific Instruments. ...	16	147	51	198	12-00	82	14,608	34,221
Jewellery, Timepieces, and Plated-ware. ...	80	735	89	824	11-95	361	43,104	148,966
Heat, Light, and Power ...	244	4,990	86	5,076	11-18	131,748	6,780,895	1,110,563
Leatherware, n.e.i. ...	44	742	371	1,113	11-67	209	32,913	152,152
Minor Wares, n.e.i. ...	107	1,724	986	2,710	11-85	1,409	302,250	356,696
Total ...	6,356	112,362	36,514	148,876	11-53	339,784	35,229,530	26,783,242
METROPOLITAN DISTRICT.								
Treating Raw Materials, &c. ...	122	2,939	196	3,135	11-77	7,726	719,432	699,906
Oils, Fats, &c. ...	27	940	340	1,280	11-87	1,218	435,385	217,181
Processes in Stone, Clay, Glass, &c. ...	165	4,549	81	4,630	11-43	8,932	1,081,212	1,048,896
Working in Wood ...	289	4,103	99	4,202	11-68	9,074	528,529	869,899
Metal Works, Machinery, &c. ...	572	20,938	673	21,611	11-83	17,606	3,443,706	4,628,929
Connected with Food, Drink, &c. ...	299	8,610	5,017	13,627	11-77	21,249	4,201,252	2,333,039
Clothing, Textile Fabrics, &c. ...	1,085	8,245	20,770	29,015	11-76	7,184	1,337,521	3,493,267
Books, Paper, Printing, &c. ...	308	6,867	2,993	9,860	11-91	9,203	1,902,985	1,805,163
Musical Instruments, &c. ...	27	672	52	724	11-93	333	42,343	160,195
Arms and Explosives ...	3	15	3	18	12-00	9	2,827	1,997
Vehicles and Fittings, Saddlery, &c. ...	307	3,670	157	3,827	11-73	1,599	246,605	653,630
Ship and Boat-building, &c. ...	33	4,108	19	4,127	11-99	5,077	1,520,116	1,082,695
Furniture, Bedding, and Upholstery. ...	276	3,483	509	3,992	11-77	2,720	186,801	692,890
Drugs, Chemicals, and By-products. ...	121	1,513	990	2,503	11-88	2,259	446,361	421,671
Surgical and other Scientific Instruments. ...	16	147	51	198	12-00	82	14,608	34,221
Jewellery, Timepieces, and Plated-ware. ...	78	723	89	812	11-94	358	42,169	147,191
Heat, Light, and Power ...	109	2,854	45	2,899	11-24	86,899	3,722,763	611,435
Leatherware, n.e.i. ...	43	736	370	1,106	11-67	208	32,773	150,592
Minor Wares, n.e.i. ...	92	1,678	985	2,663	11-86	1,327	292,437	348,713
Total ...	3,972	77,150	33,439	110,589	11-77	183,960	20,199,825	19,451,510

## SIZE OF ESTABLISHMENTS.

The following statement shows the distribution of establishments, according to the number of persons engaged, in the Metropolitan district and in the remainder of New South Wales, at intervals since the year 1901 :—

Establishments employing—	1901.*		1911.		1913.		1921-22.	
	Establish- ments.	† Em- ployees.	Establish- ments.	† Em- ployees.	Establish- ments.	† Em- ployees.	Establish- ments.	† Em- ployees.
METROPOLITAN DISTRICT.								
Under 4 employees	79	188	238	547	302	678	692	1,486
4 employees ...	105	420	179	716	190	760	264	1,056
5 to 10 employees	429	3,636	743	5,336	809	5,800	1,149	8,118
11 „ 20 „ ...	334	4,939	520	7,834	570	8,423	749	10,951
21 „ 50 „ ...	279	8,564	477	14,655	527	16,593	715	22,712
51 „ 100 „ ...	107	7,518	202	14,360	193	13,678	222	15,387
101 and upwards...	82	17,750	151	34,144	160	40,331	181	50,879
Total ..	1,415	42,415	2,510	77,592	2,751	86,263	3,972	110,589
REMAINDER OF STATE.								
Under 4 employees	439	1,094	538	1,282	569	1,347	555	1,261
4 employees ..	256	1,024	371	1,484	367	1,468	308	1,232
5 to 10 employees	768	5,333	993	6,817	1,010	6,920	869	5,968
11 „ 20 „ ...	294	4,236	381	5,390	381	5,457	372	5,300
21 „ 50 „ ...	142	4,612	164	4,874	175	5,219	173	5,266
51 „ 100 „ ...	30	2,086	40	2,858	47	3,311	48	3,371
101 and upwards...	23	5,430	42	8,327	46	10,415	59	15,889
Total ...	1,952	23,815	2,529	31,032	2,595	34,137	2,384	38,287
NEW SOUTH WALES.								
Under 4 employees	518	1,282	776	1,829	871	2,025	1,247	2,747
4 employees ...	361	1,444	550	2,200	557	2,228	572	2,288
5 to 10 employees	1,197	8,369	1,736	12,153	1,819	12,720	2,018	14,086
11 „ 20 „ ...	628	9,175	901	13,224	951	13,880	1,121	16,251
21 „ 50 „ ...	421	13,176	641	19,529	702	21,812	888	27,978
51 „ 100 „ ...	137	9,604	242	17,218	240	16,989	270	18,758
101 and upwards...	105	23,180	193	42,471	206	50,746	240	66,768
Total ...	3,367	66,230	5,939	108,624	5,346	120,400	6,356	148,876

\* Excluding a number of small establishments in country districts (see Year Book 1907-8, page 448).

† Including working proprietors.

The establishments employing 10 hands or less represent 60 per cent. of the total number, the factories in the Metropolitan area being generally larger than those in other parts of the State. The average number of employees per establishment is 28 in the Metropolitan, 16 in the remainder of the State, and 23 in the whole State; in 1901 the averages were 30, 12, and 20 respectively.

Throughout the period there has been a constant increase in the number of factories in the Metropolitan district, the increase since 1913 being very marked in respect of the small establishments. In the country districts the number of establishments increased between 1901 and 1913, and declined subsequently, though the number of very large works is greater now than before the war.



The relative position of each group of establishments in the Metropolitan and in the country districts is shown in the following statement :—

Establishments employing--	Proportion of each Group to Total.							
	Metropolitan District.				Remainder of State.			
	1901.	1911.	1913.	1921-22.	1901.	1911.	1913.	1921-22.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Under 4 employees ...	5·6	9·5	11·0	17·4	22·5	21·3	22·0	23·3
4 employees ...	7·4	7·1	6·9	6·6	13·1	14·7	14·1	12·9
5 to 10 employees ...	30·3	29·6	29·4	28·9	39·3	39·2	38·9	36·4
11 „ 20 „ ...	23·6	20·7	20·7	18·9	15·1	15·1	14·7	15·6
21 „ 50 „ ...	19·7	19·0	19·2	18·0	7·3	6·5	6·7	7·3
51 „ 100 „ ...	7·6	8·1	7·0	5·6	1·5	1·6	1·8	2·0
101 and upwards ...	5·8	6·0	5·8	4·6	1·2	1·6	1·8	2·5
Total ...	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0

In the Metropolitan district the tendency towards an increase in the number of small workshops and factories has caused the proportion of establishments employing less than 5 hands to rise from 16·6 per cent. in 1911 to 24 per cent. in 1921-22. In the country districts the proportion of small factories has remained fairly constant at approximately 36 per cent.

#### CAPITAL INVESTED IN PREMISES.

With regard to capital permanently invested in manufacturing industries, particulars are available only of the value of land, buildings, and fixtures which are the property of the occupier; if they are not the property of the occupier the rental value is recorded.

The following statement shows the extent to which the capital value of the premises used for manufacturing purposes has increased since 1901, also the advance in the value of plant and machinery installed :—

Year.	No. of Establish- ments.	Capital Value of Premises (owned and rented).	Value of Machinery, Tools, and Plant.	Average per Establishment.	
				Value of Premises.	Value of Ma- chinery, Tool and Plant.
		£	£	£	£
1901*	3,367	7,838,628	5,860,725	2,328	1,740
1906	3,861	19,335,966	8,407,337	2,418	2,178
1911	5,039	13,140,207	12,510,600	2,608	2,483
1912	5,162	14,395,026	13,795,195	2,789	2,672
1913	5,346	15,405,018	14,861,676	2,882	2,780
1914-15	5,269	16,843,698	16,866,982	3,197	3,201
1915-16	5,210	17,770,517	18,211,104	3,410	3,495
1916-17	5,356	18,920,057	20,364,122	3,532	3,802
1917-18	5,414	20,533,171	21,739,739	3,793	4,015
1918-19	5,460	22,081,877	23,651,152	4,044	4,332
1919-20	5,662	24,108,890	26,866,083	4,263	4,657
1920-21	5,837	28,428,917	31,115,444	4,870	5,331
1921-22	6,356	32,052,303	35,229,530	5,043	5,543
Percentage Increases, 1901-1922...	88·8	308·9	501·1	113·6	218·4

\* Excluding a number of small country establishments. † Value in 1907.

The premises owned by the occupiers in 1921-22 were valued at £21,615,543, and rented premises at £10,436,760, the valuation of the latter being based on the rent paid, capitalised at fifteen years' purchase.

In 1914-15 the value of machinery and plant became greater than the value of premises and the excess in 1921-22 was nearly 10 per cent. The great advance in values, however, is due in part only to the extension of industries and allowance must be made for inflation.

#### SALARIES AND WAGES.

The amount of salaries and wages quoted throughout this chapter is exclusive of amounts drawn by working proprietors.

The salaries and wages paid to employees in manufactories and works amounted in 1921-22 to £26,783,242; male workers received £23,466,566, equal to £218 0s. 6d. per head; and female workers, £3,316,676, or £91 12s. 4d. per head.

A comparison of the total amount of salaries and wages paid since 1901 is given in the next table, together with the average amount received and the average time worked per employee. Similar information regarding each class of industry will be found in Part "Manufactories and Works" of the Statistical Register.

Year.	Salaries and Wages (exclusive of drawings by Working Proprietors).				Level of Average Wage.			Average time Worked per Employee.
	Total.	Average per Employee.			1911 = 1000.			
		Male.	Female.	Total.	Males.	Females.	Total.	
	£	£ s. d.	£ s. d.	£ s. d.				months.
1901	4,952,000	* *	* *	81 0 0	* *	* *	839	11·32
1906	5,591,838	* *	* *	77 9 7	* *	* *	804	11·45
1911	10,047,662	114 4 9	43 2 1	96 7 1	1000	1000	1000	11·55
1912	11,592,052	122 10 0	48 7 9	104 8 10	1072	1123	1085	11·59
1913	12,683,384	127 15 4	50 5 10	109 13 2	1118	1167	1138	11·62
1914-15	12,667,721	130 19 3	52 18 10	112 18 11	1146	1223	1172	11·46
1915-16	13,413,845	141 9 1	53 14 6	119 5 11	1238	1246	1238	11·56
1916-17	14,381,309	149 6 11	57 9 10	126 3 3	1307	1334	1309	11·55
1917-18	14,701,255	148 18 8	61 5 6	126 3 7	1304	1422	1309	11·47
1918-19	16,957,919	160 16 4	65 9 3	137 6 6	1408	1519	1425	11·57
1919-20	21,681,196	181 1 1	74 6 8	154 17 6	1535	1724	1607	11·54
1920-21	25,618,591	210 19 10	87 12 2	182 7 10	1847	2032	1893	11·52
1921-22	26,783,242	218 0 6	91 12 4	186 4 3	1908	2125	1933	11·53

\* Not available.

Since 1911 the average wages of males have increased by over 90 per cent., and of females by 112 per cent.; it should be noted, moreover, that the proportion of juvenile labour was slightly less in the earlier year, when boys under 16 represented 3 per cent. of the total males, compared with 3·5 per cent. in 1922, and girls under 16 represented 8·5 per cent. of all females employed, as against 11·4 per cent. in 1922.

Comparing the wages in 1922 with those in 1913, the year before the war, it will be seen that, notwithstanding average working period, the average wage of males rose from £127 15s. 4d. to £218 0s. 6d., and of females from £50 5s. 10d. to £91 12s. 4d.; the rates of increase are 70·6 per cent. and 82·1 per cent. respectively.

The average wage of males is highest in the arms and explosives and the shipbuilding industries, in which a large proportion of highly-skilled labour is employed; the average amounts paid per worker in 1921-22 being £255 13s. 11d. and £243 19s. 1d. respectively. No other industry pays an average wage approaching these amounts. The lowest average wage, £173 18s. 6d., was received by leatherware workers.

Of the female workers, those employed in the clothing industries received an average wage of £94 5s. 8d. in 1921-22, being £5 13s. 3d. more than was paid to employees engaged in printing, bookbinding, etc.

#### PROGRESS OF MANUFACTORIES.

The following statement shows the general progress of manufactories as regards the value of production, and the amount paid in wages during the period 1901 to 1922 :—

Year.	Value of—					Salaries and Wages paid, exclusive of Drawings of Working Proprietors.	Balance (Output, less Materials and Wages).
	Materials Used.	Fuel Consumed, including Motive-power Rented.	Goods Manufactured, or Work Done.	Production, being Value added to Raw Materials.	Production per Employee.		
	£	£	£	£	£	£	£
1901	15,140,896	496,715	25,648,471	10,010,869	174.2	4,952,000	5,058,560
1906	22,102,685	609,998	34,796,169	12,083,486	155.3	5,591,888	6,491,538
1911	33,070,951	1,242,613	54,346,011	19,432,447	178.9	10,047,662	9,834,785
1912	37,122,441	1,369,141	61,163,328	22,680,746	193.5	11,592,052	11,088,694
1913	40,537,476	1,371,425	65,672,435	23,763,594	197.5	12,633,384	11,080,210
1914-15	42,559,370	1,364,136	68,253,332	24,329,776	207.0	12,667,721	11,662,655
1915-16	44,227,079	1,528,220	70,989,864	25,234,565	216.6	13,413,845	11,820,720
1916-17	77,044,637	1,766,664	85,914,320	27,132,989	229.7	14,381,399	12,751,680
1917-18	64,613,261	3,060,076	96,178,191	29,499,554	244.4	14,701,255	14,768,569
1918-19	69,737,452	2,268,041	104,803,018	32,767,525	256.2	16,957,919	15,899,666
1919-20	81,183,497	2,710,666	123,213,480	39,314,317	271.8	21,681,196	17,633,121
1920-21	91,164,505	3,603,744	137,541,386	43,128,137	297.4	25,618,591	17,569,446
1921-22	82,690,396	3,983,730	132,820,665	46,745,930	313.9	26,783,242	19,962,697

The value of the output has grown from £25,648,000 in 1901 to £132,820,000 in 1922, and the value of production from £10,011,000 to £46,746,000.

Of the value of goods manufactured or work done in 1921-22, the cost of materials used and fuel consumed amounted to £86,074,126, and salaries and wages to £26,783,242.

Thus, on the average, out of every hundred pounds' worth of goods produced in manufactories in 1921-22 the materials and the fuel cost £64 16s., while the workers received £20 4s., leaving a balance of £15 for the payment of overhead charges and for profits.

There are, of course, numerous items to be considered before profits accrue. The cost of these cannot be determined accurately, but from the information available it is possible to make a fairly reliable estimate with regard to some very important items, namely, depreciation, and interest on invested capital in factories other than Government establishments.

Excluding Government workshops and factories from consideration, the capital invested in lands, buildings, and fixtures in 1921-22 amounted to £17,741,000. Municipal valuations would indicate that the unimproved value of property is about 35 per cent. of the improved value, and on this basis the value of the buildings and fixtures would be about £11,532,000.

Factory buildings probably depreciate in value more quickly than any other class of buildings, and therefore 4 per cent. can be regarded as a very moderate rate to be allowed yearly on that account. Depreciation of plant is more rapid, and varies considerably in different industries. As a result of inquiries made of some of the largest manufacturers in various industries and of the managers of State undertakings, it is estimated that 6½ per cent. is a fair average allowance for depreciation of plant and machinery. The allowance to be made for depreciation of buildings and fixtures would therefore be about £461,000, and on plant and machinery £1,990,000, or a total of £2,451,000.

In addition to the allowance for depreciation, a further allowance should be made for interest on invested capital. The capital invested in machinery and plant is £30,620,000, and in land and buildings £17,741,000; to this

must be added the capital represented by materials awaiting treatment and by manufactured goods awaiting disposal. It has been ascertained that the average value of materials on hand awaiting treatment represents about 21·5 per cent. (equal to about two and a half months' supply) of the value of all material used during the year, which would indicate that during 1921-22 approximately £17,788,000 were thus invested. The value of unsold stocks on hand is about 5 per cent. of the total value of the output, which would represent a further investment of capital to the extent of £6,241,000. The total capital invested in 1920-21, therefore, was about £72,390,000. Interest on this amount at 5½ per cent., which could have been obtained by investment in Government loans, would be £3,981,000. The estimated allowance to be made for depreciation and interest would therefore be £6,432,000, to which must be added cost of rented premises, £695,000, so that £7,127,000 should be deducted in respect of charges which must be taken into account before profits can be estimated. This would reduce the balance remaining after payment of wages, material, and fuel to £12,227,000 equal to 9·8 per cent. of the total output, or 10·9 per cent. of cost of all items mentioned above, and such items of expense as insurance, advertising, rates and taxes would still have to be paid.

The varying proportions of the items which make up the total value of output of the manufacturing industries in various years since 1901 have been as follow :—

Year.	Proportion per cent. of Total Value of Output absorbed by—				Total.
	Materials.	Fuel.	Salaries and Wages.	Profit and Overhead Charges.	
1901	59·0	2·0	19·3	19·7	100
1906	64·0	1·8	16·1	18·1	100
1911	61·9	2·3	18·6	17·2	100
1912	60·7	2·2	18·9	18·2	100
1913	61·7	2·1	19·3	16·9	100
1914-15	62·3	2·0	18·6	17·1	100
1915-16	62·3	2·2	18·9	16·6	100
1916-17	66·4	2·0	16·7	14·9	100
1917-18	67·2	2·1	15·3	15·4	100
1918-19	66·5	2·2	16·2	15·1	100
1919-20	65·9	2·2	17·6	14·3	100
1920-21	66·1	2·6	18·6	12·7	100
1921-22	61·8	3·0	20·2	15·0	100

The proportionate expenditure on materials between 1915-16 and 1920-21 was higher than formerly, representing approximately two-thirds of the total value of the products, but it dropped to the 1913 level in 1921-22; the proportionate cost of fuel used is low, but has risen by 50 per cent. since 1901. Apart from these items, which are more or less fixed charges, there are the items of salaries and wages, overhead expenses, and profits to be met. The proportionate amount of salaries and wages declined as materials and fuel advanced, and in 1917-18 represented only 15·3 per cent. of the value of output; since then, the proportion has increased, and in 1921-22 was higher than in any other year quoted. It is noteworthy that, after the outbreak of war, a decline occurred in the proportions absorbed by salaries and wages, and by other expenses and profits, but whereas a recovery in wages began in 1918-19, the proportion left for profit and overhead charges continued to diminish until 1921-22. It should be remembered, however, that these proportions have no relation to capital invested.

The following table shows, in each class of industry, the value of goods manufactured and of work done, the cost of materials used and of fuel

consumed, the amount paid in wages and salaries, and the proportion of the total value of output which each of these charges represented in the year 1921-22 :—

Class of Industry.	Goods Manufactured, and Work done.	Materials used.	Fuel consumed, including Motive-power rented.	Salaries and Wages.	Proportionate Value of Manufactured Goods represented by—			
					Materials used.	Fuel, etc.	Salaries and Wages.	Balance.
	£	£	£	£	per cent.	per cent.	per cent.	per cent.
Treating Raw Material, Pastoral Products	7,457,931	5,759,104	123,183	858,659	77.2	1.7	11.5	9.6
Oils and Fats, etc.	2,613,765	1,805,906	57,158	279,631	69.1	2.2	10.7	18.0
Processes in Stone, Clay, Glass, etc.	4,292,519	1,264,562	465,043	1,578,046	20.5	10.8	36.8	22.9
Working in Wood	6,224,312	3,839,940	51,177	1,622,924	61.7	0.8	26.1	11.4
Metal Works, Machinery, etc.	80,013,172	17,947,240	1,570,508	7,009,236	56.8	5.2	25.3	12.7
Connected with Food and Drink, etc.	41,642,322	32,805,295	557,238	3,303,147	78.3	1.3	7.9	12.5
Clothing and Textile Fabrics, etc.	14,139,157	7,866,213	85,167	3,833,428	55.6	0.6	27.1	16.7
Books, Paper, Printing, etc.	6,660,834	3,251,264	71,978	2,051,368	43.8	1.1	39.8	19.3
Musical Instruments, etc.	423,009	171,265	2,916	130,195	40.5	0.7	37.9	20.9
Arms and Explosives	279,456	39,286	3,118	154,841	14.5	1.1	57.2	27.2
Vehicles, Fittings, and Saddlery, etc.	2,392,877	1,023,635	24,617	914,542	42.8	1.0	38.2	18.0
Ship and Boat-building, &c.	2,264,385	708,142	47,572	1,360,333	31.3	2.1	60.1	6.5
Furniture, Bedding, and Upholstery	2,349,631	1,269,590	18,005	752,327	54.0	0.8	32.0	13.2
Drugs, Chemicals, and By-products	3,869,625	2,284,523	38,653	493,153	59.0	1.0	12.7	27.3
Surgical and other Scientific Instruments	98,552	38,596	735	34,221	40.0	0.8	35.4	23.8
Jewellery, Timepieces and Plated-ware	362,819	140,821	3,914	148,666	33.8	1.1	41.1	19.0
Heat, Light, and Power	5,905,834	1,919,124	834,504	1,119,563	32.3	14.1	18.9	34.7
Leatherware, N.E.I.	644,902	362,795	1,616	152,152	56.2	0.3	23.6	19.9
Minor wares, N.E.I.	1,108,873	703,915	20,528	356,696	58.6	1.7	29.8	9.9
Total	132,820,065	52,099,306	3,933,730	26,783,242	61.8	3.0	20.2	15.0

\* Exclusive of drawings of working proprietors.

It is interesting to note the extent to which the value of materials is enhanced by the processes of treatment. For all industries materials were 61.8 per cent. of the value of the output, but there was great diversity amongst the various classes, the proportion ranging from 14.5 per cent. in those industries dealing with arms and explosives to 78.3 per cent. in those treating the raw material of food and drink products. These variations can be understood readily when the wide difference between the operations of the industries is considered, and the value of the plant and machinery employed is taken into account. Extensive plant alone is not a factor in the creation of high values, this being rather the result of the extensive use of machinery, and the industries dealing with food and those engaged in shipbuilding may be cited as examples. In the former class materials represent 78.3 per cent. and wages only 7.9 per cent. of the total value, while in the latter class the total wages paid amount to a sum 9.2 per cent. in excess of the value of materials used, and represent 60.1 per cent. of the total value. In local shipyards a very large proportion of the work consists of repairs and renovations in which the cost of materials is much less than in the actual manufacture, and owing to the nature of the employment little machinery is brought into requisition.

The ratio of the total amount of wages to the value of production, that is, the value added to raw materials, varied during the last ten years from 48.8 per cent. in 1917-18 to 59.3 per cent. in 1920-21, and in 1921-22 it represented

57·2 per cent. The ratio varies considerably in different industries, as will be seen in the following table, which covers the year 1913 and the five years 1917-22 :—

Class of Industry.	1913.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Treating Raw Material, etc. ...	48·2	30·2	37·1	31·4	51·8	54·6
Oils, Fats, etc. ...	34·7	22·7	27·3	29·9	34·4	37·2
Processes in Stone, Clay, Glass, etc. ...	57·0	62·4	60·7	58·6	59·1	61·6
Working in Wood ...	68·8	62·4	68·7	64·2	66·0	69·6
Metal Works, Machinery, etc. ...	57·9	51·4	57·1	78·3	73·2	66·8
Connected with Food, Drink, etc. ...	36·2	36·9	38·6	35·7	42·4	39·0
Clothing, Textile Fabrics, etc. ...	65·5	62·1	59·3	58·6	57·5	62·0
Books, Paper, Printing, etc. ...	61·6	56·5	59·6	57·2	61·6	61·5
Musical Instruments, etc. ...	56·8	60·4	60·8	61·7	58·8	64·4
Arms and Explosives ...	*61·8	*39·5	*38·3	*47·2	*43·0	*23·0
Vehicles and Fittings, Saddlery, etc. ...	64·5	68·6	70·0	67·1	69·6	68·0
Ship and Boat-building, etc. ...	82·7	90·8	90·7	91·2	88·2	90·2
Furniture, Bedding, and Upholstery ...	69·3	68·9	69·8	69·4	71·9	70·8
Drugs, Chemicals, and By-products ...	28·7	25·4	25·5	31·2	38·0	31·9
Surgical and other Scientific Instruments	59·1	46·5	50·7	64·8	70·0	59·8
Jewellery, Timepieces, and Plated-ware	65·6	72·4	70·4	66·2	70·6	68·3
Heat, Light, and Power ...	26·4	29·5	27·6	33·6	39·5	35·4
Leatherware, N.E.I. ...	55·3	53·7	53·3	59·3	62·9	54·2
Minor Wares, N.E.I. ...	57·8	65·5	58·5	60·3	59·5	75·0
Total* ...	53·3	48·8	51·6	55·1	59·3	57·2

\* Excluding Commonwealth Small Arms Factory.

#### FUEL CONSUMED.

The value of the fuel consumed in factories in 1922 was £3,159,919. Coal is used most extensively in all large industries with the exception of smelting, where coke is used. The quantity and value of each kind of fuel used in the various industries in 1922 were as follows :—

Industry.	Coal.		Coke.		Wood.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
Treating Raw Material, etc. ...	55,231	84,228	542	610	7,299	4,997
Oils and Fats, etc. ...	30,978	38,129	115	169	185	196
Stone, Clay, Glass, etc. ...	337,020	377,887	6,613	6,830	25,711	21,262
Working in Wood ...	7,529	10,457	416	566	12,512	6,413
Metal Works, Machinery, etc. ...	399,372	540,106	406,761	794,160	9,042	5,947
Food, Drink, etc. ...	213,241	309,747	21,075	27,917	71,365	54,408
Clothing, Textile Fabrics, etc. ...	14,774	22,939	2,094	2,488	20	27
Books, Paper, Printing, etc. ...	11,082	21,186	241	269	...	...
Musical Instruments, etc. ...	230	322	270	288	...	...
Arms and Explosives ...	...	...	...	...	...	...
Vehicles, Saddlery, etc. ...	1,967	3,271	659	1,139	717	810
Shipbuilding and Repairing ...	9,055	11,638	1,478	5,930	144	134
Furniture, Bedding and Upholstery ...	619	998	121	128	338	171
Drugs, Chemicals, and By-products ...	9,909	13,838	1,416	1,716	115	58
Surgical and Scientific Instruments ...	4	8	42	53	...	...
Jewellery, Timepieces, and Plated-ware ...	...	...	62	64	...	...
Heat, Light, and Power ...	554,468	697,655	196,414	72,701	6,192	4,853
Leatherware, N.E.I. ...	18	28	16	12	1	2
Minor Wares, N.E.I. ...	8,765	12,398	83	166	480	600
Total ...	1,654,262	2,144,835	548,418	915,206	134,121	99,878

The cost of fuel varies greatly in accordance with the proximity of the industry to the source of supply; for instance, much of the coke used for smelting iron at Lithgow is produced on the South Coast, and has to be hauled long distances by train.

## EMPLOYMENT.

The relative importance of the different classes of manufacturing industries, based on their capacity to employ human labour, is shown in the following comparative statement of average number of persons engaged:—

Class of Industry.	Persons engaged, including Working Proprietors.				
	1901.	1911.	1913.	1920-21.	1921-22.
Treating Raw Material, etc.: Pastoral Products	2,981	3,890	3,992	3,840	4,182
Oils and Fats: Animal, Vegetable, etc. ...	698	889	923	1,584	1,686
Processes in Stone, Clay, Glass, etc. ...	3,102	5,695	6,563	8,829	7,610
Working in Wood ...	5,108	8,181	9,293	9,157	9,026
Metal Works, Machinery, etc. ...	13,831	22,862	27,619	36,860	34,263
Connected with Food, Drink, etc. ...	11,372	14,050	15,197	17,874	19,140
Clothing, Textile Fabrics, etc....	14,497	26,504	26,565	28,298	52,036
Books, Paper, Printing, etc. ...	5,573	9,134	10,009	10,527	11,282
Musical Instruments, etc. ...	226	387	406	642	724
Arms and Explosives ...	11	33	379	850	612
Vehicles and Fittings, Saddlery, etc....	2,541	4,416	4,550	5,267	5,617
Ship and Boat Building, etc. ...	1,541	2,429	3,358	5,175	5,616
Furniture, Bedding, and Upholstery ...	2,140	3,534	4,035	4,312	4,352
Drugs, Chemicals, and By-products ...	450	1,460	1,365	2,659	2,809
Surgical and other Scientific Instruments ...	69	96	97	206	198
Jewellery, Timepieces, and Plated-ware ...	165	753	816	828	824
Heat, Light, and Power ...	1,417	2,795	3,577	5,038	5,076
Leatherware, N.E.I. ...	117	461	525	919	1,113
Minor Wares, N.E.I. ...	391	1,055	1,131	2,146	2,710
<b>Total ...</b>	<b>66,230</b>	<b>108,624</b>	<b>120,400</b>	<b>145,011</b>	<b>148,876</b>

During the quinquennial period, 1901-6, the increase in the number of persons engaged in manufacturing industries was 11,592; during the next quinquennial period, 1906-11, it amounted to 30,802. During the period 1911-16 it was only 7,777; owing to enlistments for war service, there was a decline of 3,789 persons during the two years 1913-15, and a further decline of 210 persons during 1915-16. The number of employees has risen in each year since 1916, the rate of increase being greatest between 1917 and 1920.

Since 1901 the number of employees in manufacturing industries has increased by 124·8 per cent., while the general population increased by 56·2 per cent., the corresponding annual rates being 4·0 and 2·2 per cent. respectively. The very great proportionate growth of factories between 1906 and 1911, and the slackening between 1911 and 1916 are shown in the following comparison :—

Period.	Increase in Factory Employees.		Increase in Population— Average Annual Rate.
	Number.	Average Annual Rate.	
		per cent.	per cent.
1901-06 (5 years).....	11,592	3·3	1·7
1906-11 (5 years).....	30,802	6·9	2·6
1911-16 (4½ years).....	7,777	1·5	2·4
1916-21 (5 years).....	28,610	4·5	2·1
1921-22 (1 year).....	3,865	2·7	2·2

The following table shows the average number of persons engaged in manufacturing industries in the Metropolitan area and in the remainder of the State since 1901 :—

Year.	Employees (including Working Proprietors).			Year.	Employees (including Working Proprietors).		
	Metropolitan District.	Remainder of State.	Total.		Metropolitan District.	Remainder of State.	Total.
1901	42,415	23,815	66,230	1916-17	85,404	32,593	117,997
1906	52,605	25,217	77,822	1917-18	88,019	32,535	120,554
1911	77,592	31,032	108,624	1918-19	92,762	34,829	127,591
1912	83,352	32,209	115,561	1919-20	107,777	36,677	144,454
1913	86,263	34,137	120,400	1920-21	104,552	40,459	145,011
1914-15	84,971	31,640	116,611	1921-22	110,589	38,287	148,876
1915-16	85,365	31,036	116,401				

During 1921-22 the number of workers in the Metropolitan area increased by 6,037, but there was a decrease of 2,172 workers in the country, and a net increase of 3,865 in the whole State.

Under the classification of "Remainder of State" are included such urban centres as Newcastle, Broken Hill, Parramatta, Granville, Lithgow, Wollongong, Goulburn, and Bathurst, yet it is significant that Sydney and its suburbs constitute the chief manufacturing centre of the State, and that whereas the number of employees in the Metropolitan district increased by 68,174, or 160·7 per cent., from 1901 to 1922, the increase in all other parts of the State was only 14,472 persons, or 60 per cent.

The increase in the number of employees of each sex during the decennium, 1912-22, is shown below :—

Year.	Metropolitan District.		Remainder of State.	
	Males.	Females.	Males.	Females.
1912	58,595	24,757	29,583	2,626
1921-22	77,150	33,439	35,212	3,075
Increase per cent.	31·7	35·1	19·0	17·1

The proportion of females employed is far greater in the Metropolitan area than in the country districts, and in comparison with the increase in the employment of males, the rate of increase in the employment of females has been greater in the Metropolitan and less in the country districts.



*Average Time Worked per Employee.*

The capacity of manufactories to afford employment depends to a certain extent upon the regularity of their working. Generally speaking, employment in the factories of New South Wales has been very constant during the past ten years. This may be illustrated by the following statement, which shows for each class of industry the average time worked per employee (inclusive of working proprietors) in representative years since 1911 :—

Class of Industry.	1911.	1913.	1919-20.	1920-21.	1921-22.
	Months.	Months.	Months.	Months.	Months.
Treating Raw Material ...	10-11	9-98	10-88	10-83	11-05
Oils and Fats ...	11-38	11-95	11-39	11-78	11-71
Stone, Clay, Glass ...	11-56	11-47	11-39	11-48	11-31
Working in Wood ...	10-82	11-09	10-90	11-00	10-89
Metal Works, Machinery ...	11-70	11-87	11-63	11-49	11-51
Food, Drink, etc. ...	11-10	11-29	11-18	11-07	11-15
Clothing, Textile Fabrics ...	11-64	11-81	11-76	11-70	11-77
Books, Paper, Printing ...	11-89	11-93	11-83	11-87	11-90
Musical Instruments ...	12-00	12-00	11-64	11-77	11-93
Arms and Explosives ...	8-21	11-96	12-00	12-00	12-00
Vehicles, Saddlery ...	11-83	11-72	11-62	11-60	11-70
Ship Building ...	11-98	11-94	11-98	11-98	12-00
Furniture, Bedding ...	11-58	11-53	11-59	11-73	11-78
Drugs, Chemicals ...	11-77	11-87	11-9*	11-78	11-76
Surgical Instruments ...	12-00	11-35	11-94	12-00	12-00
Jewellery ...	11-98	11-94	11-86	11-65	11-95
Heat, Light, and Power ...	11-81	11-65	11-46	11-75	11-18
Leatherware, N.E.I. ...	11-91	11-86	11-80	11-90	11-67
Minor Wares, N.E.I. ...	11-51	11-89	11-51	11-82	11-85
Mean of all Industries ...	11-55	11-62	11-54	11-52	11-53

In a number of classes work is so regular as to be almost continuous; the factories in which employment is least regular are those engaged in treating raw material and working in wood.

*Sex and Age Distribution of Employees.*

The following table shows the number of males and females employed in factories, and the ratio to the male and female population respectively during each of the last ten years :—

Year.	Males.		Females.		Total.	
	Number.	Average per 1,000 of Male Population.	Number.	Average per 1,000 of Female Population.	Number.	Average per 1,000 of Total Population.
1912 ...	88,178	96-1	27,383	33-1	115,561	66-3
1913 ...	93,036	96-9	27,364	31-8	120,400	66-1
1914-15 ...	90,409	91-7	26,202	29-2	116,611	61-9
1915-16 ...	87,724	90-1	28,677	31-1	116,401	61-4
1916-17 ...	88,910	93-3	29,087	30-9	117,997	62-3
1917-18 ...	90,025	93-6	30,529	31-8	120,554	62-7
1918-19 ...	96,884	98-0	30,707	31-4	127,591	64-9
1919-20 ...	109,836	105-5	34,618	34-7	144,454	70-9
1920-21 ...	112,187	105-2	32,824	32-1	145,011	69-4
1921-22 ...	112,362	103-6	36,514	35-0	148,876	69-9

Manufacturing industries provide employment for about 7 per cent. of the total population; more than 10 per cent. of males find employment therein, but only about 3 per cent. of females. Proportionately the employment of males, which diminished during the earlier years of the war period, has since increased by 15 per cent.; the employment of females has fluctuated to a greater extent, but shows a tendency to increase.

The following table shows the age distribution of the persons of each sex engaged in manufactories in various years since 1907, the first year for which statistics respecting the employment of children are available :—

Year.	Persons Employed in Manufactories, including Working Proprietors.								
	Aged 16 years and over.			Children under 16 years of age.			Total.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1907	63,547	18,634	82,181	2,406	1,880	4,286	65,953	20,514	86,467
1911	79,609	24,274	103,883	2,474	2,267	4,741	82,083	26,541	108,624
1912	85,953	25,290	111,243	2,225	2,093	4,318	88,178	27,383	115,561
1913	90,651	25,278	115,929	2,385	2,086	4,471	93,036	27,364	120,400
1914-15	87,972	23,876	111,848	2,437	2,326	4,763	90,409	26,202	116,611
1915-16	85,146	26,072	111,218	2,578	2,605	5,183	87,724	28,677	116,401
1916-17	86,306	26,638	112,944	2,604	2,449	5,053	88,910	29,087	117,997
1917-18	87,441	27,938	115,379	2,584	2,591	5,175	90,025	30,529	120,554
1918-19	94,298	28,146	122,444	2,586	2,561	5,147	96,884	30,707	127,591
1919-20	106,012	30,854	136,866	3,824	3,764	7,588	109,836	34,618	144,454
1920-21	108,514	29,214	137,728	3,673	3,610	7,283	112,187	32,824	145,011
1921-22	108,451	32,364	140,815	3,911	4,150	8,061	112,362	36,514	148,876

During the year 1921-22 there was an increase of 175 in the number of male employees and of 3,690 in the number of females; of those aged 16 years and over, there was a decrease of 63 males and an increase of 3,150 females; there were 778 more children in the factories than in the previous year, viz., 238 boys and 540 girls. Of the male employees in 1921-22, boys under 16 years numbered 3,911 or 3·5 per cent.; 15,926, or 14·2 per cent., were between 16 and 21 years and 92,525, or 82·3 per cent., were adults. Of the females, the number and proportion in the respective groups were 4,150, or 11·4 per cent., 11,951, or 32·7 per cent., and 20,413, or 55·9 per cent.

Under a factory system of production, there is a tendency to increase the employment of women and children. In New South Wales legislation has been introduced to keep such employment within limits considered conducive to the general good of the community, and the proportion of female labour has remained fairly constant.

The following table shows, for the year 1911 and the last two years, the industries in which women and girls have been employed in greatest numbers, and the ratio to every 100 males employed in the same industries.

Only workers in the factory have been included, and managers, overseers, clerks, messengers, &c., have been excluded.

Industry.	Average Number of Women and Girls employed in factory.			Number of Women and Girls per 100 Males employed in factory.		
	1911.	1920-21.	1921-22.	1911.	1920-21.	1921-22.
Food, etc.—						
Aerated Waters ... ..	128	81	62	14	14	11
Biscuits ... ..	690	822	853	121	102	93
Condiments, Coffee, and Spices...	209	545	637	122	125	123
Confectionery ... ..	442	1,190	1,225	70	113	109
Cornflour, Oatmeal ... ..	181	125	127	97	68	74
Jam and Fruit-canning ... ..	440	721	663	137	113	111
Meat-preserving ... ..	117	26	61	14	29	19
Pickles, Sauces, and Vinegar ...	170	230	237	195	163	160
Tobacco ... ..	746	1,262	1,211	128	131	132
Clothing, etc.—						
Dressmaking and Millinery ...	4,650	4,249	3,753	11,071	5,119	6,053
Hats and Caps ... ..	995	815	753	227	159	175
Waterproofs and Oilskins ... ..	97	106	61	539	505	265
Shirts, Ties, and Scarfs... ..	1,599	1,817	2,011	1,859	1,781	1,676
Slop Clothing ... ..	5,026	3,798	4,889	601	632	690
Tailoring ... ..	2,702	2,927	3,089	163	276	273
Furriers ... ..	24	129	105	114	182	309
Woollen and Tweed Mills ... ..	561	793	874	172	101	140
Hosiery and Knitted Goods ... }		1,186	1,907		663	455
Dyeworks and Cleaning ... ..	22	105	111	92	76	86
Tents and Tarpaulins ... ..	230	255	308	230	274	250
Boots and Shoes ... ..	1,499	1,612	1,972	61	61	70
Chemicals, Drugs, and Medicines ...	325	540	589	89	79	91
Bedding, Flock, and Upholstery ...	96	122	136	28	34	39
Brooms and Brushware ... ..	9	60	59	5	25	24
Furnishing, Drapery, etc. ... ..	160	296	243	239	435	357
Inks, Polishcs, etc. ... ..	...	170	180	...	93	93
Leatherware ... ..	56	279	330	16	57	54
Manufacturing Jewellery ... ..	47	51	49	11	12	12
Paper, Paper Bags, and Boxes ...	727	827	868	201	119	125
Printing and Book-binding ... ..	1,387	1,711	1,758	29	34	32
Rubber Goods ... ..	59	344	628	28	57	92
Soap and Candles ... ..	144	286	345	39	59	60
Tinsmithing ... ..	34	195	226	5	29	27
Other Industries ... ..	815	1,927	2,520	2	3	4
Total ... ..	24,387	29,602	32,840	36	32	35

## CHILD LABOUR.

The law regulating primary education prescribes that children must attend school until the completion of their fourteenth year, exception being made only in case of those who, prior to reaching that age, have obtained exemption certificates, which may be granted when the children have attained a certain standard of education, or, in special cases, when attendance at an evening school is arranged. Since 1896 the Factories and Shops Act has prohibited the employment of children under the age of 14 in any factory, unless by special permission of the Minister for Labour and Industry, and such permission may not be given to a child under the age of 13 years. Permission is not granted, except in extreme circumstances, to any girl under the age of 14 years. Special permits were issued during 1922 to 177 children between the ages of 13 and 14 years, viz., to 117 boys and 59 girls in the Metropolitan district, and to 1 boy in Newcastle.

The employment in a factory of juveniles under the age of 16 years is conditional upon a medical certificate as to physical fitness being secured by the factory occupier. During the year 1922 certificates were issued to 7,563 juveniles as follows:—Metropolitan district, 3,111 boys and 3,777 girls; Newcastle, 231 boys and 272 girls; Broken Hill, 24 boys; and in the rest of the State, 91 boys and 57 girls.

Of 8,061 juveniles engaged in manufacturing, 6,952 were employed within the Metropolitan area. A review of the statistics of juveniles shows that up to 1914 the boys outnumbered the girls, but in 1921–22 the number of girls was the greater. About 93 per cent. of the girls were working in Sydney and suburbs, but one-fifth of the boys were employed in establishments located outside the Metropolitan area.

The following statement shows the proportion of boys and girls amongst the factory employees in various years since 1907, also the proportion of children aged 13 to 15 years who are employed in factories:—

Year.	Children employed in Factories.			
	Boys per 1,000 Male Employees.	Girls per 1,000 Female Employees.	Children per 1,000 Employees.	Children per 1,000 of all Children aged 13 to 15.
1907 ... ..	36·5	91·6	49·6	45·9
1911 ... ..	25·2	76·4	37·4	49·9
1913 ... ..	25·6	76·2	37·1	43·3
1914–15 ...	27·0	88·8	40·8	45·4
1915–16 ...	29·4	90·8	44·5	48·6
1916–17 ...	29·3	84·2	42·8	46·7
1917–18 ...	28·7	84·9	42·9	47·1
1918–19 ...	26·7	83·4	40·3	46·1
1919–20 ...	34·8	108·7	52·5	66·9
1920–21 ...	32·7	110·0	50·1	62·8
1921–22 ...	34·8	113·7	54·1	68·4

The proportion of children amongst the factory employees declined in a marked degree between 1907 and 1913; during the next five years it rose slowly, then dropped almost to the pre-war level; in 1919–20, when the basic wage was increased by 17s. per week in the case of males, and by 9s. in the case of females, a marked increase occurred, particularly in the clothing industries. The proportion of boys did not, however, reach the figure of the year 1907, and it has not increased during the last two years, but the proportion of girls amongst the female employees was 19 per cent. higher in 1920 than in 1907 and it has since increased. In 1907, on the average only 46 children per thousand were employed in factories, and the proportion did not exceed 49 until 1919–20, when it rose to 67 per 1000.

#### OCCUPATIONAL STATUS

Of all the persons engaged in manufacturing industries during the year 1921–22, approximately 85 per cent. were actually employed in the different processes of manufacture, or in the sorting and packing of finished articles.

The following statement shows the occupational status of the persons engaged in each class of industry in 1921-22 :—

Class of Industry.	Working Proprietors, Managers, and Overseers.	Clerks, etc.	Engine-drivers, etc.	Workers in Factory, Mill, etc.	Carters, Messengers, and others.	Persons regularly employed at their own homes.	Total.
Treating Raw Material, etc. ...	355	143	157	3,377	150	...	4,182
Oils, Fats, etc. ...	76	147	48	1,391	21	3	1,686
Processes in Stone, Clay, Glass, etc.	529	294	248	6,381	158	...	7,610
Working in Wood ...	1,082	474	388	6,562	511	9	9,026
Metal Works, Machinery, etc. ...	1,845	1,231	558	30,449	179	1	34,263
Connected with Food, Drink, etc....	1,289	1,483	803	15,062	488	12	19,140
Clothing, Textile Fabrics, etc. ...	1,970	618	50	28,677	155	566	32,036
Books, Paper, Printing, etc. ...	959	951	34	9,171	158	9	11,282
Musical Instruments ...	35	52	2	632	2	1	724
Arms and Explosives ...	19	37	6	542	8	...	612
Vehicles and Fittings, Saddlery, etc.	754	330	13	4,433	70	7	5,617
Ship and Boat Building, etc. ...	159	313	69	5,039	36	...	5,616
Furniture, Bedding, and Upholstery	469	107	12	3,718	40	6	4,352
Drugs, Chemicals, and By-products	210	335	44	2,174	45	1	2,809
Surgical and other Scientific Instruments.	21	13	...	163	1	...	198
Jewellery, Timepieces, and Plated-ware.	107	54	...	635	28	...	824
Heat, Light, and Power ...	397	207	650	3,773	66	3	5,076
Leatherware, N.E.I....	88	74	...	944	7	...	1,113
Minor Wares, N.E.I. ...	180	90	13	2,405	21	1	2,710
Total ...	10,554	6,953	3,078	125,528	2,144	619	148,876
Males ...	9,787	4,589	3,078	92,688	2,117	103	112,362
Females ...	767	2,364	...	32,840	27	516	36,514

The status of workers employed varied greatly in the nineteen standard classes of manufacturing industry. The average proportion per cent. of working proprietors, managers, and overseers, was 7·1 for all classes, but it varied from 3·1 in industries making arms and explosives, to 13·6 in those making vehicles, fittings, saddlery, and harness.

The workers actually employed in mill, workshop, and factory, represented about 84 per cent. of the total number engaged, and nearly 63 per cent. were males.

Only 4·7 per cent. of the employees were clerical workers, and of these more than one-half were females. The practice of giving out work at piece rates is very limited. Workers employed in their own homes represented only 0·4 per cent. of the total number employed, and were almost entirely women engaged by clothing factories.

### INDIVIDUAL INDUSTRIES.

The foregoing information relating to the manufacturing industry as a whole or to groups of industries serves to show the general development of the industry, but it does not furnish particulars relating to individual industries. It is desirable that detailed information should be available regarding all the important industries, but the output of many of them, *e.g.*, engineering works, is not readily classifiable, and as the output is perhaps the most interesting item, it has been deemed advisable to confine the remarks in the following pages to industries whose importance merits special mention, and whose output may be shown in detail with regard to both quantity and value.

## TANNERIES.

Although skins and hides are exported in large quantities, more than 70 per cent. of the hides are tanned in the State, and the tanning industry is steadily extending its operations. Besides maintaining an extensive export trade in leather, it provides practically all the raw material needed for local requirements and for a growing oversea trade in footwear and other leather goods. Two-thirds of the leather produced locally is sole leather, but the production of the finer sorts is receiving increasing attention; the exports of sole leather in 1921 were valued at £151,223, and of other leather £257,387. Fancy leathers are still imported in large quantities, thus 506,887 sq. feet, valued at £45,690, were imported into New South Wales in 1921-22, and practically the whole came from the United States of America.

Two-thirds of the number of tanneries in operation in the State are situated within the boundaries of the Metropolitan area.

The following table gives particulars of the industry for the year 1901 and at intervals thereafter :—

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ...	108	76	72	80	80
Number of Employees ...	1,059	1,039	942	1,242	1,333
Average* Horse-power used ...	711	1,044	1,269	2,688	2,974
Value of Land and Buildings † £	115,752	105,990	124,413	£65,166	274,946
Value of Plant and Machinery £	47,274	82,241	89,010	172,132	186,079
Total Amount of Wages paid £	80,757	104,695	102,116	262,724	294,943
Value of Fuel ... .. £	4,893	7,160	6,469	17,855	21,516
Value of Materials used ...	£ 578,164	786,817	865,021	1,684,791	1,373,056
Value of Output ... ..	£ 735,231	982,023	1,060,049	2,103,525	1,891,201
Value of Production ... ..	£ 152,174	188,046	188,559	400,879	496,629
Materials Treated—					
Hides—					
Calf and Yearling ... No.	*	214,681	130,445	100,829	275,283
Other ... .. No.	*	317,025	323,297	692,335	469,395
Hide-pieces ... .. cwt.	*	2,537	4,050	2,000	446
Sheep Pelts ... .. No.	*	4,642,865	3,693,515	3,813,618	3,912,006
Other Skins ... .. No.	*	125,576	148,121	284,632	250,674
Bark ... .. tons	*	11,706	9,633	11,570	11,862
Articles Produced—					
Leather ... .. lb.	*	13,945,005	12,724,000	17,707,065	17,851,680
Basils ... .. lb.	*	4,324,139	3,821,434	2,730,162	3,670,253
Pelts, pickled ... .. No.	*	357,833	355,938	690,084	125,010
Other Skins, selling value £	*	17,151	33,075	255,535	155,681
Fleshings ... .. cwt	*	*	*	64,467	76,526

\* Not available.

† Includes rented premises.

## WOOL-SCOURING AND FELLMONGERING.

The wool-scouring and fellmongering industry has made rapid progress during recent years, but there is room for much greater development, as only one-seventh of the wool clip was scoured locally in 1921-22. The exports in 1921-22 of greasy wool were 6,815,000 lb. and of scoured wool 48,760,000 lb.

In the year 1920-21 the quantity of wool treated was less than usual, owing to the stagnant condition of the wool trade generally, but conditions improved considerably in 1921-22.\*

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ...	73	59	62	42	45
Number of Employees ...	1,459	1,603	1,553	1,461	1,531
Average Horse-power used ...	997	2,009	2,436	3,623	3,616
Value of Land and Buildings† £	125,836	169,418	156,277	276,320	260,065
Value of Plant and Machinery £	66,391	169,300	183,388	373,442	393,769
Total amount of Wages paid £	77,429	126,215	147,268	280,731	330,210
Value of Fuel... .. £	9,059	16,277	19,079	39,542	52,269
Value of Materials used ...	£ 25,244	2,151,713	2,496,029	2,991,868	3,148,888
Value of Output ... ..	£ 150,614	2,393,883	2,808,198	3,677,014	3,786,718
Value of Production ...	£ 116,311	225,593	293,090	645,604	585,561
Materials Treated—					
Greasy Wool ... .. lb.	*	34,023,054	31,241,578	24,960,202	41,244,353
Scoured Wool ... .. lb.	*	*	*	5,738,701	6,790,585
Skins... .. No.	*	5,180,335	4,930,409	4,088,690	4,211,273
Articles Produced—					
Scoured Wool ... .. lb.	*	33,283,378	31,677,852	25,515,850	32,417,533
Wool-tops and Noils ... lb.	*	*	*	5,623,414	5,771,859
Pelts... .. No.	*	4,655,524	4,397,680	3,235,429	2,844,566

\* Not available.

† Includes rented premises.

## SOAP AND CANDLE FACTORIES.

Of the industries in which oils and fats are treated, soap and candle making is by far the most important. The industry has grown to such an extent that it supplies practically the whole of the local requirements of soap and candles, except fancy and medicated soaps, besides maintaining a small export trade with the islands of the Pacific. The following table shows the chief particulars of the industry since 1901 :—

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ...	44	37	31	26	27
Number of Employees ...	533	678	725	946	1,122
Average Horse-power used ...	503	785	761	964	1,021
Value of Land and Buildings† £	84,923	165,218	170,800	223,423	238,452
Value of Plant and Machinery £	89,147	150,453	170,995	287,714	330,403
Total amount of Wages paid £	37,681	49,555	59,117	141,135	170,925
Value of Fuel ...	5,932	12,205	11,081	40,160	44,093
Value of Materials used ...	£ 208,676	359,096	406,113	859,555	721,702
Value of Output ...	£ 322,036	597,544	610,175	1,177,511	1,264,540
Value of Production ...	£ 107,428	226,243	192,981	277,796	498,745
Materials Treated—					
Tallow ... .. cwt.	*	117,423	143,593	139,153	196,535
Alkali ... .. lb.	*	6,370,007†	6,623,006†	4,516,054	5,837,011
Wax ... .. lb.	*	£	£	2,481,854	2,671,599
Resin ... .. cwt.	*	180,697	7203,95	22,327	25,586
Copra Oil ... .. cwt.	*			15,560	24,851
Sand ... .. cwt.	*			3,595	22,650
Articles Produced—					
Soap ... .. cwt.	233,600	277,449	278,899	280,620	356,081
Soap Extract, Powders, &c. lb.	*	965,807	1,873,403	4,051,251	4,673,319
Candles (including wax) lb.	3,895,468	5,388,848	5,563,404	4,191,534	4,844,718
Glycerine ... .. lb.	631,680	*	*	1,882,423	1,886,422
Soda Crystals ... ..	£	14,014†	19,153†	3,456	6,824
Oleine ... ..	£	*	*	26,714	24,559
Stearine ... ..	£	*	*	25,500	27,245

\* Not available.

† Includes rented premises.

‡ All factories.

## BRICK AND TILE WORKS.

Owing to the abundance of clay everywhere, brickworks have been established in all parts of the State, and they employ approximately equal numbers of persons in the Metropolitan district and in the remainder of the State, but the output of the Metropolitan kilns is much greater and more varied. In a number of cases the industry is associated with tile making, so the figures for the two industries have been combined. The following figures present detailed information concerning the industry in 1901 and later years :—

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ...	182	222	217	159	162
Number of Employees ...	1,823	3,017	3,665	3,716	3,071
Average Horse-power used ...	1,228	4,865	7,677	9,181	9,320
Value of Land & Buildings† £	200,170	391,875	49,350	865,182	863,718
Value of Plant & Mach'ry £	108,589	449,100	666,470	1,114,500	1,201,735
Total Amount Wages paid £	149,342	322,781	428,106	777,536	592,874
Value of Fuel ... .. £	46,355	101,267	125,342	276,402	225,733
Value of Materials used £	32,199	70,881	83,653	189,150	212,650
Value of Output ... .. £	364,251	726,620	872,322	1,640,743	1,341,748
Value of Production ... £	285,697	554,472	663,327	1,175,191	903,365
Articles Produced—					
Bricks ... .. No.	157,999,000	327,864,000	339,435,000	360,092,005	239,285,368
Tiles ... .. £	*	24,857	27,422	286,862	219,911
Pipes ... .. £	*	52,241	67,593	6,754	7,047
Pottery ... .. £	*	51,763	48,407	...	1,165
Hollow Building Blocks £	*	3,864	3,940	4,159	...
Fire Bricks, &c. ... £	*	*	*	72,225	42,467

\* Not available.

† Includes rented premises.

In earlier years pottery making was also carried on in association with brick making, but it is now conducted in most cases as a separate industry. The manufacture of roofing tiles developed to such an extent during the war that practically all the tiles now used in the State are of local production.

*State Brickworks, Homebush.*

In the latter part of 1911 the Government established State Brickworks at Homebush, near Sydney, where a considerable area of suitable clay had been found.

The business results of the undertaking are highly satisfactory; at 30th June, 1922, the accumulated trading profit amounted to £113,498, and it was estimated that the Government had saved a sum of £110,749 by purchasing bricks from the works. The requirements of the different Government Departments are supplied and bricks are sold to the public also at prices below those ruling in private brickyards.



The following table gives particulars of the operations of the State Brick-works at Homebush Bay since 1917 :—

Particulars.	1917.	1918.	1919.	1920.	1921.	1922.
Bricks manufactured .. ..	29,720,259	28,936,715	35,439,684	37,367,209	38,586,954	40,912,716
Used for Public Works .. ..	22,255,645	13,912,968	20,896,882	17,722,653	19,306,494	17,537,496
Sold to Private Purchasers ..	6,127,621	15,879,945	14,863,730	19,492,205	19,230,679	22,789,963
Used at Works .. ..	146,638	28,281	10,402	35,840	20,840	701,519
Stocks at 30th June .. ..	1,472,976	588,297	257,067	373,278	402,179	285,917
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Cost of Manufacture per 1,000 ..	1 12 1	1 14 5	1 14 9	2 0 0	2 5 7	2 7 2
Sale price per 1,000—						
Seconds .. ..	1 15 0	1 15 0	1 18 6	2 7 6	2 12 6	2 12 6
Common .. ..	1 17 6	1 17 6	2 1 0	2 10 0	2 15 0	2 15 0
Face.. ..	3 5 0	3 5 0	3 10 0	4 3 0	4 8 0	4 8 0

The sale prices as stated in the table were for bricks loaded into trucks at the yard, Homebush Bay.

## SAWMILLS.

Sawmilling is an important industry in many parts of the State, the majority of the mills being situated in the forest areas.

Besides general sawmilling, moulding and planing are undertaken at some mills, and the cutting of wood-paving blocks. In the more important centres sawmills are conducted in conjunction with yards where imported timbers are treated and joinery work is done.

Details concerning the sawmilling industry at intervals since 1901 are as follow :—

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ..	345	452	477	496	466
Number of Employees ..	4,088	5,205	5,788	5,615	5,260
Average Horse-power used...	5,189	10,280	12,521	14,597	13,934
Value of Land and Buildings* .. ..	£ 317,193	465,518	583,102	811,830	785,284
Value of Plant and Machinery .. ..	£ 273,883	526,909	619,264	908,192	874,702
Total Amount of Wages Paid .. ..	£ 304,826	456,520	589,736	926,276	890,989
Value of Fuel .. ..	£ 17,691	6,593	9,230	24,405	25,531
Value of Materials used ..	£ 824,065	1,309,549	1,668,321	2,732,656	2,379,072
Value of Output .. ..	£ 1,335,153	2,057,807	2,517,103	4,103,924	3,683,406
Value of Production. ..	£ 494,487	741,755	839,652	1,346,863	1,278,893
Materials Treated—					
Logs—					
Hardwood sup. ft. ..	} 213,228,000	147,706,000	185,441,006	178,133,092	153,691,247
Softwood .. ..		65,301,000	73,589,000	67,823,577	72,575,017
Articles Produced—					
Sawn Timber—					
Hardwood sup. ft. ..	} 180,028,000	100,079,000	126,369,000	117,781,837	101,165,777
Softwood .. ..		51,392,000	54,335,000	45,628,945	52,102,045

\* Includes rented remises.

## METAL WORKS, MACHINERY, ETC.

This group is by far the most important of the manufacturing industries in the State, because it provides employment for nearly one-third of the adult males engaged in factories and workshops.

The output of these works constitutes a considerable proportion of the total value of local manufactures, though they supply but a very small part of the local requirements of manufactured metals and machinery. Details

of the products are not available, but in view of their great importance the following particulars relating to the operations in 1921-22 are shown :—

Items.	Engineering Works.	Ironworks and Foundries.	Railway and Tramway Workshops.	Smelting.	Other.	Total.
Number of Establishments ...	257	124	35	21	314	751
Number of Employees ...	6,945	5,478	10,513	3,611	7,716	34,263
Average Horse-power used ...	7,276	24,771	6,433	27,957	11,224	77,661
Value of Land and Buildings* £	1,248,339	787,395	1,334,653	591,590	1,548,201	5,510,268
Value of Plant and Machinery £	1,215,853	2,280,967	1,506,757	2,926,311	1,570,791	9,500,679
Total amount of Wages paid £	1,482,003	1,141,424	2,527,344	944,476	1,514,009	7,609,256
Value of Fuel ...	58,619	256,863	42,480	1,094,907	117,639	1,570,508
Value of Materials used ...	1,605,605	5,440,361	1,814,498	4,624,382	3,562,394	17,047,240
Value of Output ...	3,802,190	7,238,776	4,386,641	8,591,560	5,993,996	30,013,172
Value of Production ...	2,137,975	1,541,552	2,529,663	2,872,271	2,313,963	11,395,424

\* Includes rented premises.

#### *Iron and Steel Works.*

In New South Wales there are large supplies of iron ore and of coal, both of excellent quality, and in close proximity to each other and to the seaboard. An account of the situation and extent of the iron ore deposits was given in the 1917 issue of the Year Book, at page 174, and a short history of the development of the iron and steel industry in last year's issue, at page 345. There are only two establishments which produce iron and steel, namely, the Eskbank (Hoskins) Iron Works, at Lithgow, and the Broken Hill Proprietary Company's Works at Newcastle. At Eskbank local iron ores are used, but the ore treated at Newcastle is imported from South Australia.

The following table shows the production of pig-iron in New South Wales in each year from 1907 to 1922 :—

Year.	From New South Wales Ores.	From Other Australian Ores.	Total.	Year.	From New South Wales Ores.	From Other Australian Ores.	Total.
	Tons.	Tons.	Tons.		Tons.	Tons.	Tons.
1907	18,631	...	18,631	1915	76,318	66,662	142,980
1908	30,393	...	30,393	1916	52,556	74,035	126,591
1909	26,762	...	26,762	1917	45,025	102,394	147,419
1910	40,487	...	40,487	1918	68,072	138,873	206,945
1911	36,354	...	36,354	1919	80,941	152,754	233,695
1912	32,677	...	32,677	1920	94,384	251,416	345,800
1913	46,563	...	46,563	1921	99,790	266,759	366,549
1914	75,150	...	75,150	1922	66,141	235,166	301,307

The quantity of iron ore used in 1922 for the production of pig-iron was 486,185 tons, of which 122,711 tons were mined in New South Wales.

The particulars relating to the production of steel in the last three years are as follows :—

	1920.	1921.	1922.
	tons.	tons.	tons.
Steel ...	42,032	50,151	31,183
„ Rails ...	54,170	41,353	90,545
„ Bars and Sections ...	133,373	102,291	73,494
„ Plates ...	4,417	1,865	80
„ Billets ...	34,471	36,014	16,888

*Smelting.*

Smelting, as a distinct industry, is carried on in several centres in New South Wales; there are 21 establishments for the treatment of ores, the most important works being at Cockle Creek, Boolaroo, in the Newcastle district, and at Port Kembla in the South Coast. Ores for treatment at Cockle Creek are obtained from various parts of Australia, including the Barrier district of New South Wales, but a large portion of the Broken Hill ores is treated in South Australia.

The following statement shows the operations of New South Wales smelting companies in connection with both local and imported ores during 1921-22 :—

Metal.	Quantities of Metals extracted from Ores, Concentrates, etc., the produce of—							
	N.S.W.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	N. Territory.	New Zealand.
Silver ... .. oz.	1,528,178	12,797	92,668	6,913	12,153	297,472	...	...
Lead ... .. tons	15,858	1	82	...	1	933	...	...
Copper ... .. „	189	...	2,150	...	183	6,120	...	1
Tin ... .. „	786	7	216	...	19	...	9	...
Iron—Pig ... .. „	66,141	...	...	235,166	...	...	...	...
Antimony ... .. „	24	...	...	...	...	...	...	...

## BUTTER FACTORIES.

Butter-making is one of the chief industries connected with the preparation of articles of food; it gives employment to over 1,000 persons, and has an annual output valued at £6,531,000. Butter is an important item of the export trade, and more than 95 per cent. of local production is made in factories.

Details concerning butter factories and their operations in various years since 1901 are as follow :—

Items.	1901.	1911.	1913.	1920-1921.	1921-1922.
Number of Establishments ...	130	150	140	126	129
Number of Employees ...	909	968	898	1,022	1,057
Average Horse-power used...	1,765	2,161	2,578	3,843	3,787
Value of Land and Buildings † ... .. £	247,394	186,893	174,114	308,189	507,934
Value of Plant and Machinery ... .. £	172,767	230,485	240,133	395,668	418,561
Total Amount of Wages paid... .. £	74,176	110,617	123,401	225,392	257,828
Value of Fuel... .. £	13,924	23,599	24,807	61,655	73,303
Value of Materials used ...	£ 1,260,920	3,205,863	3,035,041	8,017,379	5,678,989
Value of Output ... .. £	1,535,398	3,475,890	3,324,377	8,974,967	6,531,061
Value of Production... .. £	260,554	246,428	264,529	895,933	778,769
Materials Treated—					
Milk ... .. gals.	*	1,019,151	580,749	145,084	120,135
Cream ... .. lb.	*	176,402,048	63,262,439	174,694,907	209,229,935
Articles Produced—					
Butter ... .. lb.	34,282,214	78,421,512	73,245,383	79,864,745	95,694,451

\* Not available.

† Includes rented premises.

In addition to the butter factories, there are a number of other establishments engaged in the treatment of dairy produce. Particulars relating to all such factories are given in the following table :—

Year.	Factories.							Estimated Value of Plant and Machinery.	Machinery in use.					Persons Employed.	
	Butter only.	Cream and Milk.	Cheese only.	Bacon and Hams only.	Butter and Cheese.	Condensed Milk.	Total.		Engines.		Butter Workers and Churns.*	Cream Separators.	Cheese Presses.	Males.	Females.
									Number.	Horse- power.					
							£			No.	No.	No.			
1917-18	118	961	59	22	6	4	1,170	568,757	1,353	8,294	284	989	131	1,423	59
1918-19	120	927	58	23	8	4	1,140	587,291	1,344	8,300	270	1,003	149	1,432	66
1919-20	118	970	52	22	8	4	1,174	570,051	1,361	8,693	242	1,027	124	1,476	72
1920-21	124	1,006	49	18	5	4	1,206	649,888	1,264	9,332	262	1,031	136	1,469	72
1921-22	124	1,250	48	19	6	4	1,451	702,905	1,551	10,032	256	1,291	135	1,599	75

\* Includes combined churns and butter-workers.

The figures relating to persons employed in each of the three years ended June, 1920, have been amended since last issue by the exclusion of those engaged partly in treating the milk and partly in farm work.

Bacon, hams, butter, and cheese are made also on farms; the chapter in this Year Book dealing with the Dairying Industry should, therefore, be consulted for complete information regarding the production of these commodities.

#### MEAT-PRESERVING AND REFRIGERATING.

In 1919-20 there were nine establishments, with 1,109 persons employed in connection with meat-preserving, including one establishment in the country division, which was a rabbit cannery, but owing to depression in the meat trade only six of these establishments, employing 452 persons, were in operation in 1921-22. The following table shows the number of carcasses treated in establishments dealing with meat by canning and chilling at intervals since 1901 :—

Year.	Meat-preserving Works.				Refrigerating Works.	
	Cattle.	Sheep and Lambs.	Meat and Tongues and Sundries.		Cattle.	Sheep and Lambs.
			Quantity.	Value.		
	No.	No.	lb.	£	No.	No.
1901	16,538	732,094	*	*	18,195	963,614
1906	9,995	274,950	*	*	5,352	1,283,862
1911	61,596	925,475	3,023,931	31,978	10,188	1,469,923
1912	50,941	616,435	2,301,418	37,079	11,552	1,191,711
1913	100,827	374,523	7,305,113	81,807	29,887	2,160,484
1918-19	41,517	648,435	9,989,757	240,819	32,337	583,695
1919-20	44,828	449,533	9,821,595	191,841	50,218	1,419,569
1920-21	4,740	13,988	2,429,345	25,811	34,147	491,198
1921-22	9,362	192,226	7,038,867	43,403	46,630	727,423

\* Not available.

The total output in 1921-22 was valued at £326,156, the principal item being tinned meat, 6,748,331 lb., valued at £170,751.

The operations of the works are affected by a number of factors, most important being the seasons and the condition of world markets. In adverse seasons, or in a succession of good seasons, the pastoralists sell all the stock which is in marketable condition, but on the breaking of a drought, stock are

retained for fattening or breeding. An unusually severe drought broke in June, 1920, and for a time stock were withheld; a few months later the oversea meat markets became glutted, and prices fell below the cost of production, consequently operations in 1920-21 were much restricted. In the following year signs of recovery became apparent, but the output remained far below normal.

The detailed figures relating to the freezing and chilling of carcass meat at refrigerating works during the year 1921-22 were as follow:—

Live Stock Treated.				Frozen for Export.	Chilled.	Total.
				No.	No.	No.
Bullocks and Cows	...	...	...	33,554	3,712	37,266
Calves	...	...	...	5,103	4,261	9,364
Total	...	...	...	38,657	7,973	46,630
Sheep	...	...	...	171,154	22,634	193,788
Lambs	...	...	...	526,744	6,891	533,635
Total	...	...	...	697,898	29,525	727,423
Pigs	...	...	...	476	2,252	2,728
Total Carcases	...	...	...	737,031	39,750	776,781

#### BISCUIT FACTORIES.

There are in the State twelve establishments engaged in the manufacture of biscuits, of which nine are within the Metropolitan area. The industry has made rapid progress, and the value of the annual output now exceeds £1,395,000. A growing export trade in biscuits is maintained with the islands of the Pacific. Details for 1901 and other years, including 1921-22, are given below:—

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments	8	6	7	10	12
Number of Employees	845	1,360	1,594	1,800	1,953
Average Horse-power used	131	556	1,017	1,115	1,198
Value of Land and Buildings† £	42,253	94,050	111,886	164,031	173,612
Value of Plant and Machinery £	29,066	86,192	107,720	135,285	121,663
Total Amount of Wages paid £	35,165	70,055	88,358	221,791	221,892
Value of Fuel	£ 1,862	7,104	9,731	23,614	26,880
Value of Materials used	£ 126,891	332,341	426,135	936,747	857,588
Value of Output	£ 213,645	529,108	635,226	1,358,266	1,395,505
Value of Production	£ 84,892	189,653	229,360	397,905	511,037
Materials Treated—					
Flour	...	...	...	...	...
Sugar	...	...	...	...	...
Other—Value only	...	...	...	...	...
Articles Produced—					
Biscuits	...	...	...	...	...
Cakes—Value only	...	...	...	...	...
Other—	...	...	...	...	...

\* Not available.

† Includes rented premises.

#### FLOUR-MILLS.

The amount of mill-power for grinding and dressing grain is ample for treating the flour consumed in the State, and in favourable seasons there is a considerable export trade. In 1921-22 one-seventh part of the breadstuffs exported had been milled; this included about 107,000 tons of flour.

Details concerning flour-milling at intervals since 1901 are as follow :—

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ...	89	73	68	60	62
Number of Employees ...	889	967	1,035	1,023	1,204
Average Horse-power used ...	3,149	4,670	4,708	6,384	6,789
Value of Land and Buildings† £	334,037	357,356	369,664	561,688	568,959
Value of Plant and Machinery £	254,335	340,316	342,367	572,456	714,796
Total Amount of Wages paid £	77,321	123,491	137,514	219,964	272,647
Value of Fuel ...	£ 18,977	24,648	25,455	37,746	57,828
Value of Materials used... £	1,215,420	2,211,263	2,530,840	4,951,650	5,442,051
Value of Output ...	£ 1,514,512	2,538,331	2,957,947	5,500,405	6,229,607
Value of Production ...	£ 280,115	302,420	401,652	601,009	729,728
Materials Treated—					
Wheat ... bus.	9,369,534	12,616,111	13,963,806	11,595,807	16,020,143
Articles Produced—					
Flour ... tons	191,504	253,556	285,425	244,318	336,572
Bran ... "	*	65,182	69,855	50,104	65,635
Pollard ... "	*	45,276	52,739	48,338	62,126
Sharps and Screenings ... "	*	2,308	3,508	2,103	2,847
Wheat Meal, etc. ... cwt.	*	21,840	33,900	21,863	19,999

\* Not available.

† Includes rented premises.

#### SUGAR-MILLS.

The manufacture of sugar has been an important industry for half a century, and so far back as 1878 there were 50 small mills in the State. There are now only 3 mills, but they are large though their operations tend to decrease on account of a diminution in the area under sugar-cane in New South Wales. The cultivation of sugar-cane is confined practically to the lower valleys of the Richmond, the Tweed, the Brunswick, and the Clarence Rivers, and the area has diminished in places where other crops can be grown more profitably. Queensland is the great sugar centre of Australia, on account of its immunity from the frosts, which retard the cultivation of the cane in higher latitudes.

The raw sugar manufactured in 1921-22 was valued at £536,197, and the molasses at £3,918.

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ...	4	4	3	3	3
Number of Employees ...	529	469	486	437	428
Average Horse-power used ...	2,578	3,000	2,750	1,279	1,324
Value of Land and Buildings £	12,177	52,480	54,000	106,070	107,734
Value of Plant and Machinery £	509,242	467,976	470,183	425,283	430,937
Total Amount of Wages paid £	31,764	38,004	51,476	63,003	74,452
Value of Fuel ...	£ 4,854	8,102	5,280	8,636	11,194
Value of Materials used ...	£ 95,394	107,600	208,899	303,651	343,932
Value of Output ...	£ 197,137	206,277	354,742	476,405	540,115
Value of Production ...	£ 96,889	90,575	140,563	164,118	184,989
Materials Treated—					
Cane crushed ... tons	131,083	147,799	185,910	131,313	149,474
Articles produced—					
Raw Sugar ... cwt.	296,200	345,978	443,840	302,480	356,126
Molasses ... gals.	1,072,400	796,440	966,000	649,800	940,700

#### Sugar Refinery.

There is but one sugar refinery in the State and it treats both local and imported raw product. During the year 1921-22 it handled 2,419,520 cwt. of raw sugar, which gave an output of 2,334,837 cwt. of the refined article, valued at £5,250,663.

The three mills, which were situated respectively at Harwood Island, on the Clarence River, at Broadwater, on the Richmond, and at Condong, on the Tweed, together with the refinery at Pymont, Sydney, during the year 1921-22 furnished employment to 1,108 persons.

## BREWERIES.

In 1922 there were in the State 17 establishments classed as breweries, of which 3, the largest and most important, were within the Metropolitan boundaries; the number has decreased since 1911, when there were 37, but the output has increased considerably.

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ...	51	37	31	17	17
Number of Employees ...	1,016	912	1,043	1,122	1,225
Average Horse-power used ...	1,105	1,035	1,593	3,289	3,432
Value of Land and Buildings* £	584,754	305,287	323,302	714,155	755,191
Value of Plant and Machinery £	190,710	281,316	382,290	924,181	914,667
Total Amount of Wages paid £	119,099	120,340	159,227	286,685	346,599
Value of Fuel ...	£ 13,849	17,794	23,232	66,848	81,621
Value of Materials used... £	282,128	494,219	671,157	1,316,561	1,230,997
Value of Output... £	1,022,247	1,140,151	1,423,586	2,515,224	2,492,122
Value of Production ... £	726,270	628,138	729,197	1,131,815	1,180,404
Materials Treated—					
Malt ... .. bshls.	532,930	667,457	809,171	811,385	837,267
Hops ... .. lb.	665,345	790,866	909,116	817,493	796,258
Sugar ... .. tons	3,927	4,421	5,218	5,436	5,062
Other Materials ...centsals	...	7,705	9,404	171	11,790
Articles produced—					
Ale, Beer, Stout ... gals.	13,973,751	19,804,540	24,212,202	26,775,368	25,269,932

\* Includes rented premises.

## TOBACCO FACTORIES.

Fifteen factories under this classification were in operation during the year 1921-22, all situated within the Metropolitan area; 10 were engaged in the manufacture of cigars, in 2 tobacco was manufactured, and in 3 cigarettes.

About one-thirteenth of the tobacco manufactured in New South Wales is grown in the State. In 1921-22 tobacco was grown on 1,164 acres, and the year's crop was 8,386 cwt., valued at £65,210.

Large quantities of manufactured tobacco and cigarettes are exported, but a considerable proportion of the trade consists of re-exports.

The following table shows details of the operations of tobacco factories in New South Wales at intervals since 1901 :—

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ...	20	26	24	16	15
Number of Employees ...	1,061	1,462	1,497	2,394	2,239
Average Horse-power used ...	151	630	602	657	684
Value of Land and Buildings* £	155,452	182,569	154,748	291,604	286,735
Value of Plant and Machinery £	69,124	92,135	100,298	226,043	259,798
Total Amount of Wages paid £	55,149	131,323	149,129	356,781	369,854
Value of Fuel ...	£ 1,288	1,067	919	11,697	13,814
Value of Materials used £	389,148	776,302	910,713	3,403,517	3,338,418
Value of Output ...	£ 561,991	1,250,748	1,379,048	4,240,746	4,319,584
Value of Production ...	£ 171,555	473,379	467,416	825,532	967,352
Materials Treated—					
Australian Leaf ... lb.	883,615	745,405	727,759	882,822	794,666
Imported Leaf ... ..	2,114,456	4,617,756	5,085,083	9,555,274	10,204,389
Articles produced—					
Tobacco .. ... lb.	2,524,231	3,996,471	3,885,562	6,723,576	7,802,619
Cigars ... ..	67,128	87,818	86,264	146,503	130,379
Cigarettes ... ..	457,276	1,899,462	2,526,130	5,072,883	4,553,501

\* Includes rented premises.

## WOOLLEN AND TWEED MILLS.

Although New South Wales is one of the greatest wool-producing countries in the world only a very small proportion of the woollen goods required in the State is manufactured locally, and those engaged in the manufacture of woollen materials numbered only 1,570 in 1921-22. Woollen mills were amongst the earliest established in the State, but the industry has progressed very slowly.

The output of local tweed, however, is now nearly twice as great as in 1913, and the production of other articles also shows considerable increases.

Details of employment, output, and other items, at intervals since 1901, are shown in the following table:—

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ...	4	5	5	9	9
Number of Employees ...	234	738	776	1,650	1,570
Average Horse-power used ...	255	937	1,549	2,795	3,004
Value of Land and Buildings† £	29,780	96,821	117,274	224,474	247,831
Value of Plant and Machinery £	26,650	122,927	170,693	384,662	447,529
Total amount of Wages paid £	12,459	66,536	71,852	235,668	227,540
Value of Fuel ... .. £	1,727	4,632	5,672	23,517	23,395
Value of Materials used £	30,272	142,915	156,364	745,848	648,111
Value of Output ... .. £	57,039	271,465	289,726	1,437,647	1,262,833
Value of Production ... .. £	25,040	122,918	127,690	668,282	591,327
Materials Treated—					
Scoured Wool ... lb.	685,240	1,225,470	1,242,223	3,603,448	3,324,112
Cotton ... .. „	†	†	†	332,501	280,410
Articles produced—					
Tweed and Cloth ... yds.	525,020	1,054,845	1,312,363	2,494,417	2,514,167
Flannel and Blankets £	*	95,313	62,050	198,504	169,553
Rugs and Shawls ... £	*			23,000	24,117
Noils ... .. £	†	†	†	14,588	8,626
Tops ... .. £	†	†	†	55,084	24,059
Yarn ... .. £	†	†	†	278,072	156,511

\* 3,428 yards flannel, 5,000 pairs blankets, 900 rugs. † Not available.

‡ Includes rented premises.

## BOOT AND SHOE FACTORIES.

Practically the whole of the State's requirements in boots and shoes is supplied from local factories, and considerable quantities are exported, principally to New Zealand, South Africa, and Java.



Particulars of the operation of these factories since 1901 are shown in the following table :—

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ...	100	106	105	189	302
Number of Employees ...	3,979	4,411	4,262	4,845	5,940
Average Horse-power used ...	300	855	989	1,520	1,702
Value of Land and Buildings† £	166,413	222,983	237,135	499,911	701,066
Value of Plant and Machinery £	85,571	156,643	158,916	202,881	225,622
Total Amount of Wages paid £	216,869	367,605	332,223	687,080	916,641
Value of Fuel ...	2,978	5,298	5,818	11,696	13,256
Value of Materials used.. £	398,309	709,818	754,744	1,557,225	1,524,027
Value of Output... £	692,253	1,221,748	1,284,489	2,701,972	2,957,632
Value of Production ... £	290,966	506,632	543,927	1,133,051	1,420,349
Materials Treated—					
Sole Leather ... lb.	*	5,189,000	4,467,927	5,027,822	5,624,404
Upper ... sq. ft.	*	8,010,000	8,070,590	7,286,382	9,029,092
Articles produced—					
Boots and Shoes ... pairs	2,821,724	3,730,760	3,640,068	3,232,550	3,859,000
Slippers, &c. ... "	512,584	439,428	310,026	609,401	583,249
Uppers, N.E.I.,... "	...	71,138	53,295	41,925	43,363

\* Not available.

† Includes rented premises.

In 1921-22 198 boot-repairing establishments were included; they employed 628 persons, and paid £83,061 in wages; materials to the value of £89,360 were used, including 419,871 lb. of sole leather, and 5,865 square feet of uppers; the output was valued at £247,755.

The number of boot and shoe factories was 104, of which 92 were situated within the Metropolitan area and 12 in the remainder of the State.

#### HAT AND CAP FACTORIES.

There has been considerable expansion in the industry organized for the manufacture of hats and caps, and Australian products have gained an important place in local markets as well as in the markets of New Zealand. Until 1898 fewer than 100 persons were employed in the industry, but in 1921-22 there were 1,325, of which number 60 per cent. were females.

There were 29 establishments listed under this classification in 1921-22, and 1 only was outside the Metropolitan area. Particulars of the operations since 1901 are as follows :—

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ...	10	32	38	28	29
Number of Employees ...	330	1,566	1,545	1,456	1,325
Average Horse-power used ...	21	433	651	764	796
Value of Land and Buildings* £	14,076	108,936	124,396	174,315	204,760
Value of Plant and Machinery £	7,034	60,807	69,396	88,817	147,657
Total Amount of Wages paid £	15,055	96,498	104,879	185,394	178,436
Value of Fuel ...	314	4,376	5,096	7,574	8,969
Value of Materials used... £	28,662	127,494	157,391	393,372	362,132
Value of Output... £	54,698	293,591	355,064	747,545	640,189
Value of Production ... £	25,722	161,721	192,577	346,599	269,088
Hats & Caps Manufactured No.	563,976	2,692,778	3,084,959	2,284,572	1,924,176

\* Includes rented premises.

## ELECTRIC LIGHT AND POWER WORKS.

The industries connected with the production and supply of electric light and power have made marked progress, and the establishments include a number of large municipal undertakings. The development since 1901 is shown by the details given in the next table :—

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ...	51	104	115	117	113
Number of Employees...	245	929	1,118	1,353	1,439
Average Horse-power used ...	3,494	54,734	76,054	111,591	122,707
Value of Land and Buildings† £	49,132	448,972	519,445	1,381,092	1,623,638
Value of Plant and Machinery £	192,842	1,257,173	1,391,007	2,531,358	3,407,721
Total amount of Wages paid £	28,862	134,884	170,745	327,157	385,376
Value of Fuel ...	£ 17,166	183,248	219,080	590,373	707,675
Value of Materials used £	21,123	69,484	41,884	54,995	109,081
Value of Output ...	£ 87,241	896,607	1,266,801	1,697,763	2,101,102
Value of Production ...	£ 48,952	643,875	1,005,837	1,052,395	1,284,346
Materials treated—					
Coal ... .. tons	*	259,239	302,441	510,088	524,367
Articles produced—					
Electric Light ... units	*	20,727,000	27,834,225	53,691,324	60,106,019
Power ... .. units	*	114,610,000	165,873,147	288,844,906	314,292,557

\* Not available.

† Includes rented premises.

## GASWORKS.

Despite the substantial progress that has been made in the installation of electric lighting plants, the use of gas for purposes of illumination, power, and cooking is extending also, as will be seen in the following table :—

Items.	1901.	1911.	1913.	1920-21.	1921-22.
Number of Establishments ...	38	47	52	46	46
Number of Employees ...	650	1,053	1,351	1,642	1,828
Average Horse-power used ...	711	1,394	1,722	3,125	3,587
Value of Land and Buildings† £	459,060	564,387	496,942	1,066,074	904,085
Value of Plant and Machinery £	480,533	888,711	1,112,828	1,892,835	1,978,982
Total amount of Wages paid £	80,654	154,426	194,683	437,318	410,134
Value of Fuel ...	£ 18,000	57,372	69,081	112,995	107,944
Value of Materials used £	123,440	277,861	305,592	829,906	1,002,080
Value of Output... ..	£ 583,815	910,972	1,085,257	2,264,644	2,509,412
Value of Production ...	£ 442,375	575,739	669,584	1,321,743	1,399,388
Materials treated—					
Coal ... .. tons	*	323,910	369,424	564,122	551,971
Shale... .. tons	*	55,621	37,865	27,298	30,369
Oil ... .. gals.	*	*	*	3,700,462	2,728,175
Articles produced—					
Gas ... 1,000 cub. feet	2,138,631	4,275,859	5,536,139	8,131,712	8,330,818
Coke ... .. tons	*	176,728	209,980	346,380	338,619
Tar ... .. gals.	*	3,650,000	4,180,054	9,861,830	10,346,250
Ammoniacal Liquor	*	3,365,000	2,459,188	4,216,929	4,589,936
Sulphate of Ammonia tons	*	*	*	1,061	4,427

\* Not available.

† Includes rented premises.

## FOOD AND PRICES.

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### FOOD SUPPLY AND DISTRIBUTION.

New South Wales is practically independent of external sources of supply for the food commodities which enter most largely into daily consumption, such as meat, bread, milk and butter. Local supplies of many other products are augmented by importation from neighbouring States, and the important items which are imported in large quantities from oversea countries are tropical products, *e.g.*, tea, rice, sago, etc.

Legislation, which gives the governing authorities power to supervise the conditions under which food is produced and distributed and to ensure a reasonable standard of quality, is contained in various enactments, the principal being the Pure Food Act of 1908, the Dairies Supervision and the Dairy Industry Acts and measures relating to the slaughtering of stock for food.

The administration of these laws in incorporated areas is primarily the duty of the Board of Health, but the function may be left to the municipal and shire councils. If a council fails to fulfil the duty satisfactorily, the Board itself may exercise its powers in respect of these matters, or may take steps to compel the council to do so.

The Board of Health drafts regulations under the Pure Food Act to prescribe standards for the composition, purity and quality of foods and drugs, upon the recommendations of an Advisory Committee, consisting of the president of the Board, medical men, and chemists, merchants, and others conversant with trade requirements. With a view to securing uniformity throughout Australia, the regulations have been standardised so far as the divergence of the laws of the various States will permit.

Under the Pure Food Act the sale or exhibition for sale of food which is adulterated or described falsely is prohibited, and packages must be labelled with the true description and weight of the contents and the name of the maker or vendor.

The Commonwealth Department of Trade and Customs exercises supervision in regard to the composition and labelling of food and of drugs imported into Australia.

The Weights and Measures Act affords protection to the public from dishonesty in regard to the measurement of food in the course of distribution. It prescribes that traders' weighing and measuring appliances must be kept to a specified degree of accuracy and be submitted periodically to the Weights and Measures Office for verification, and that purchasers must receive full weight and measure.

The standard weights and measures of the United Kingdom have been adopted. All articles sold by weight must be sold by avoirdupois weight; except precious metals, by troy weight; precious stones, by metric carat; drugs, retail, by apothecaries' weight. Sales by retail must be according to net weight or measure, and the practice of selling certain vegetables—*e.g.*, green peas in the pod—and other commodities by measure of capacity has been prohibited by regulation.

Special provision has been made to prevent fraud in respect of the weighing of coal and firewood. In the metropolitan and Parramatta police districts, and in other districts as proclaimed, coal and firewood must be sold by weight, though in case of quantities exceeding 5 cwt. they may be sold otherwise, with the written consent of the purchaser. Persons delivering coal or firewood are required under the regulations to carry weighing instruments, and, if requested by the purchaser, to check the weight of the goods delivered. A clause of the Act extends to all goods a requirement which under the Pure Food Act of 1908 applied to food and drugs, viz., that commodities for sale in packages must have the net weight or measure stamped thereon.

Weights and Measures Offices have been established in Sydney and in Newcastle, and the police act as inspectors to enforce the provisions of the Act in other districts.

The weight of bread is regulated under the provisions of the Bread Act of 1901. The standard loaves weigh 1 lb., 2 lb., and 4 lb. Operations under the Act are subject to limitation, as the result of legal decisions that the existing law does not authorise the inspection of bread in the course of delivery, and that an inspector may enter a bakehouse between the hours of sunrise and sunset only.

In the matter of distribution of food supplies, the local governing authorities in the incorporated areas of New South Wales are authorised to establish public markets and to regulate the hawking and peddling of food commodities within the area of their jurisdiction.

The Sydney Municipal Council has established large markets in the city for vegetables, farm produce, fish, and poultry, the area and cost being as follows:—

Market.	Floor Space.	Cost of Market.	Market.	Floor Space.	Cost of Market.
	sq. ft.	£		sq. ft.	£
Vegetable ...	95,560	127,000	Fish ...	47,517	49,000
Produce ...	45,300	48,300	Poultry ...	12,200	27,500
Fruit ...	143,000	119,500			

Cold storage works have been constructed in the market area immediately adjoining the fruit markets. They are equipped with chilling and freezing rooms for the storage of fruit, dairy and farm produce, mutton and rabbits, and their cost was £94,000. The total storage capacity of the chambers, excluding passages and grading rooms, is 224,130 cubic feet. Provision is made to supply power for an ice-making plant, also for a further addition of cooling space as may become necessary.

Outside the city area the local governing bodies have made little use of their powers in relation to the establishment of markets. During the recent period of rapidly rising prices public attention was directed towards the possibility of reducing the retail prices of goods by bringing the consumer into direct communication with the producer, thus eliminating excessive charges for distribution. As a result of the movement, a number of municipal markets were opened, but in the majority of cases the expenditure was small and there appears to have been little preliminary organisation. Consequently public interest waned as the general level of prices began to

fall, and many of the markets were discontinued. Details relating to the markets which were opened, were published in the 1921 issue of the "Year Book."

#### CONSUMPTION OF FOOD.

On the 13th September, 1910, the system of keeping records of interstate trade ceased, so that it became difficult to determine accurately the quantity of commodities consumed within the State. In view, however, of the special interest attached to the question of food consumption, particularly in relation to the cost of living, efforts have been made since 1916 to obtain the needed information from other sources, and in spite of the absence of official records of interstate trade, the following estimates are published with a large degree of confidence as indicating the consumption of the more important articles of diet since 1901.

In order to show the changes of regimen, similar information is shown for the years 1901, 1911, and 1917; in regard to 1911 it has been assumed that the consumption of all the commodities except meat was the same as the average of the three years, 1907-09; the quotations for 1917 and 1922 relate to the years ended 30th June :—

Commodity.	Unit.	Consumption per head per annum.				Commodity.	Unit.	Consumption per head per annum.			
		1901.	1911.	1917.	1922.			1901.	1911.	1917.	1922.
<b>Meat—</b>						<b>Bread</b>	2-lb. loaf.	105·0	102·0	96·0	96·0
Beef .. ..	lb.	134·4	150·9	93·6	112·6	Rice .. ..	lb.	9·7	8·2	7·5	5·4
Mutton .. ..	lb.	90·7	101·3	68·8	86·1	Sago, Tapioca .. ..	lb.	1·9	2·0	1·9	1·8
Pork .. ..	lb.	4·6	5·0	3·5	4·4	Oatmeal .. ..	lb.	7·0	7·6	6·1	5·0
Bacon, Ham .. ..	lb.	9·0	10·7	9·5	10·2	Sugar .. ..	lb.	107·8	103·8	111·5	103·1
Total Meat .. ..	lb.	238·7	267·9	175·4	213·3	Jam .. ..	lb.	14·2	15·7	14·6	10·8
<b>Fish—</b>						Butter .. ..	lb.	19·6	26·1	28·9	27·0
Fresh, Smoked .. ..	lb.	4·8	6·4	9·9	9·9	Cheese .. ..	lb.	3·7	3·5	3·4	3·3
Preserved .. ..	lb.	4·7	4·3	4·6	3·2	Milk—					
Total Fish .. ..	lb.	9·5	10·7	14·5	13·1	Fresh .. ..	gal.	16·4	17·4	19·8	20·6
Potatoes .. ..	lb.	197·7	181·0	129·6	116·4	Preserved .. ..	lb.	3·5	4·4	6·0	5·5
Flour .. ..	lb.	244·4	228·4	207·9	203·2	Tea .. ..	lb.	7·9	7·3	8·0	7·8
						Coffee .. ..	oz.	13·3	11·0	14·5	11·2

In estimating the consumption of potatoes, the quantities produced on holdings which are less than one acre in extent, and in market gardens, have not been taken into account, as particulars relating to such quantities are not recorded; the consumption of potatoes excludes also the quantity used for seed. The consumption of fresh fish, as estimated above, is exclusive of the catches of private fishermen, and of a proportion of the fish caught by licensed fishermen and sold to consumers in the immediate vicinity of the fishing grounds. The figures relating to the consumption of sugar include the sugar contents of golden syrup and treacle. The consumption of fresh milk is exclusive of the quantities recorded as being consumed in the form of sweet cream or used in the manufacture of ice-cream.

#### Meat.

The quantity of meat consumed is large, though it is lower than in the years prior to 1914-15 when the combined effects of drought and war caused a decrease in supplies and a phenomenal rise in prices. Approximately one-third of the meat sold for consumption is bone and waste, and there is little doubt that more economy is exercised now in the use of meat than in earlier years when its cheapness caused a wasteful consumption; therefore the actual decline in consumption has been less than is indicated by the figures in the

following statement, which shows the average annual consumption per head of the various kinds of meat at intervals since 1901 :—

Year.	Beef and Veal.	Mutton and Lamb.	Pork.	Bacon and Ham.	Total.
	lb.	lb.	lb.	lb.	lb.
1901	134·4	90·7	4·6	9·0	238·7
1906	140·5	89·8	4·2	9·2	243·7
1911	150·9	101·3	5·0	10·7	267·9
1915-16	97·5	72·2	2·0	7·9	179·6
1916-17	93·6	68·8	3·5	9·5	175·4
1917-18	83·9	61·6	3·9	10·0	159·4
1918-19	79·9	66·7	6·3	8·3	161·2
1919-20	90·8	68·1	2·7	8·6	170·2
1920-21	94·0	66·1	2·3	8·4	170·8
1921-22	112·6	86·1	4·4	10·2	213·3

As a general rule fluctuations in the average consumption are the result of variations in prices, but the consumption showed an upward tendency during the two years ended June, 1921, notwithstanding a rise in prices; and in 1921-22 when the retail prices were, on an average, 16 per cent. lower than in the previous year, there was an increase of 25 per cent. in the quantity consumed. The improvement after 1918 is due probably to an increase in the spending capacity of the people, owing to higher rates of effective wages which for some years had lagged behind the rising cost of living.

The movement in the average retail prices of meat (including bacon and ham), and in the consumption per head of population are illustrated in the following table of index numbers, the average for the year 1901 being taken as 100 in each case.

Year.	Average Retail Price of meat.	Average Annual Consumption of meat.	Year.	Average Retail Price of meat.	Average Annual Consumption of meat.
1901	100	100	1917-18	238	67
1906	101	102	1918-19	223	68
1911	101	112	1919-20	242	71
1915-16	223	75	1920-21	248	72
1916-17	227	73	1921-22	209	89

The decline in the consumption of meat has not apparently been counter-balanced by an increase in the consumption of fish, which as a food is inferior in every respect. It is, however, very probable that it has been offset to some extent by a growing consumption of rabbits. The local consumption of this type of food is difficult to ascertain, but is estimated to be now from 60,000 to 80,000 pairs per week, which is much greater than in the early years under review.

It is probable also that the diminution in the consumption of meat has been made good partially by an increased consumption of eggs. The number of eggs, however, used as food, either directly or as ingredients in cakes, pastry, puddings, etc., cannot be ascertained accurately.

The slaughter of stock and the sale of meat in the county of Cumberland, which contains the metropolitan area, are under the control of the Metropolitan Meat Industry Board, which consists of three members, one representing the producers, one the consumers, and a chairman.

In the Newcastle district, *i.e.*, within a radius of 14 miles from the Newcastle Post Office, slaughtering and inspection are controlled by the Newcastle

District Abattoir Board. Outside the county of Cumberland and the Newcastle district slaughtering is done at private abattoirs, which are subject to inspection by officers appointed by the local authorities and by the Board of Health.

The abattoirs controlled by the Metropolitan Meat Industry Board are situated at Homebush Bay in proximity to the stock saleyards. The carcass butchers purchase stock on the hoof, supply the labour for slaughtering and pay abattoir fees at fixed charges per head of stock treated. Meat for the metropolitan market is killed during the day and placed in a chill room until midnight when it is despatched by rail to three depots for sale to the retail butchers. The central depot is situated within the city area on the Darling Harbour railway line and it has a capacity to accommodate 6,000 carcasses of mutton and 600 carcasses of beef; and there are depots, with a capacity of 1,500 carcasses of mutton, at St. Leonards and at Rockdale to facilitate delivery in the suburban districts.

The estimated number of livestock (cattle, sheep, and pigs) required for food in New South Wales in various years since 1911 is shown in the following statement.

Year.	Bullocks and Cows.	Calves.	Sheep and Lambs.	Pigs.
1901	297,200	18,500	2,717,400	264,900
1911	412,300	54,500	4,068,200	335,400
1915-16	331,200	30,300	3,358,500	234,600
1916-17	304,700	36,800	2,941,600	304,800
1917-18	277,600	28,500	2,426,400	335,400
1918-19	311,900	49,000	2,975,600	375,800
1919-20	401,600	74,000	3,514,200	286,100
1920-21	404,400	78,300	3,483,500	247,600
1921-22	470,800	94,500	4,099,700	352,900

The figures differ from those published elsewhere in this volume showing the animals killed in slaughtering establishments, as the latter include animals slaughtered for export and animals treated in boiling-down works. Moreover, the number of pigs shown in the table is larger than the number slaughtered in New South Wales in some years, when the production of bacon was not sufficient for local requirements.

#### *Fish.*

Fish is not an important article of diet in New South Wales, the quantity consumed in 1922 representing only 13.1 lb. per head, viz., fresh and smoked 9.9 lb. and preserved 3.2 lb.

The seaboard waters contain large supplies of edible fish, but an effective method of distributing fresh fish to private consumers has not been devised, and owing to the climatic conditions it is not probable that fish will become a popular food until this difficulty has been overcome.

The State Trawling Industry was initiated in 1915, with the object of developing the deep sea fisheries in order to provide a regular supply of cheap fish but it ceased operations in February, 1923, as the undertaking had not been profitable; and the State fish shops, in which the bulk of the fish had been retailed, were closed.

Private fishermen conduct operations mainly in the river estuaries and coastal lakes and inlets, and consign their catches to agents in Sydney. The Sydney Corporation (Fish Markets) Act, passed in November, 1922, prescribes that in a defined area which embraces the metropolitan and extra-metro-

politan districts, fish may not be sold by auction except in public markets under the control of the council of a municipality or shire, and no person, except the original owner, may sell fish by wholesale unless it has been sold previously in a municipal market. The effect of the Act is to centralise the marketing of fish in Sydney in the Municipal Market where the sales are conducted by licensed agents; the Co-operative Fish Exchange, formerly a private concern, was acquired by the City Council and was closed in January, 1923. Regulations under the Fisheries Act, require that all fish sold in the fish market or by wholesale dealers must be sold by weight.

#### *Bread, Flour, and Cereal Foods.*

Such food commodities as bread and potatoes were of greater importance in the usual family dietary in early years than at the present time, when a variety of vegetables and other foods is obtainable readily.

The average consumption of bread in 1922, is estimated to have been about 96 loaves (2 lb.) per head. The decline from 102 loaves in 1911, to 96 in 1917, is attributed to the introduction of day-baking, as the bread was comparatively stale when baked on the day preceding delivery. Subsequently the hours of baking were adjusted and as fresher bread became available the consumption increased to 99 loaves in 1920. When the consumption of meat increased in 1921-22, there was apparently a reduction in the quantity of bread consumed and it dropped back to the level of 1917.

The supply of bread is sold for the most part by the bakers direct to the consumers. Before the prohibition of night-baking practically all the bread was delivered at the consumers' houses, but the practice became less common when the bread could not be delivered on the day of baking, and customers began to buy at the shops in order to obtain fresher and cheaper supplies.

The price of bread in Sydney is fixed by the Master Bakers' Association with relation to the price of flour, which is fixed ordinarily by an association of millers; during the war period—except during the months March to August, 1919—the prices of bread and flour were determined by Government proclamation.

The variations in the price of bread in Sydney since 1911 are shown below in conjunction with the price of flour, at the time when the price of bread was altered; the prices in 1901 and 1906 are given also for the purpose of comparison. The prices stated are for delivery and weekly payments; in recent years the price has been  $\frac{1}{4}$ d. per loaf less for cash over the counter.

Date.	Price of 2-lb. Loaf.	Cost of Flour per ton.	Date.	Price of 2-lb. Loaf.	Cost of Flour per ton.
	d.	£ s. d.		d.	£ s. d.
1901... ..	2 $\frac{1}{2}$	6 15 0	1919—March ...	4 $\frac{1}{2}$	11 0 0
1906... ..	3	9 0 0	October ...	4 $\frac{1}{2}$	11 15 0
1911... ..	3 $\frac{1}{4}$	8 15 0	December ..	4 $\frac{1}{2}$	11 17 6
1912—May ...	3 $\frac{1}{2}$	9 15 0	1920—January ...	5	12 15 0
1914—December ...	4	11 17 6	February 2...	5 $\frac{1}{2}$	16 7 6
1915—July ...	5	17 5 0	„ 9...	6 $\frac{1}{4}$	19 2 6
October ...	4	11 17 6	December ...	6 $\frac{1}{2}$	19 12 6
1916—March ...	3 $\frac{3}{4}$	11 5 0	1921—September ...	6 $\frac{1}{2}$	20 17 6
1917—June ...	4	11 0 0	December ...	5	11 15 0

The price of bread has not been altered since December, 1921.

The consumption of flour is stated at 203.2 lb. per head, including 153,200 tons, or 143.9 lb. per head, used for bread. In factories where biscuits are made for local consumption and for export, 13,257 tons of flour, or 14 lb. per head, were used, but the quantity used by pastrycooks is not available. Exclusive of the quantity used for bread, biscuits, etc., it is



estimated that the average household consumption of flour by a family of five persons is about 4 lb. per week, or 42 lb. per head per annum.

The consumption of oatmeal since 1911 has declined, probably on account of an increased consumption of other breakfast foods. The consumption of sago and tapioca shows but slight alteration, and the quantity of rice has decreased from 9·7 lb. to 5·4 lb. per head. Rice is imported mainly from China and India, and it is dressed locally by a mechanical process.

#### *Butter, Cheese, and Milk.*

Butter is an article of diet in general consumption throughout New South Wales, the local product being choice in quality and more than sufficient in quantity to supply the demand. The consumption of cheese is small, the average being less than 3½ d. lb. per head per annum, and it varies very little from year to year.

The quantity of fresh milk consumed is 20·6 gallons per head per annum, or less than half-a-pint per day, which is far below the quantity which is considered essential to the well-being of the community. Medical opinion holds that infants should consume 1½ pints a day and older children at least a pint; for other persons, also, milk is one of the most valuable articles of diet, and it is desirable that the supply should be of good quality, plentiful, and available at a low price to enable families to consume it in sufficient quantities. On account of its liability to deteriorate rapidly and to become contaminated, it is difficult, in a warm climate, to ensure the high standard of quality which is required for health reasons, and the difficulty increases with the distance between the place of production and the locality in which it is consumed.

The conditions under which milk and other dairy products are produced and distributed for human consumption, are subject to regulation under the Dairies Supervision Act of 1901—a consolidating measure which replaced a statute passed in 1886—and under the Pure Food Act of 1908, and the Dairy Industry Act of 1915.

Since the Dairies Supervision Act became law in 1886 there has been a marked improvement in the condition of dairies and the provisions have been an important factor in effecting an improvement in the death-rates in respect of preventable diseases. The Act prescribes the registration of all dairymen and milk vendors, and of dairy premises; the duties of registration and of inspection are vested in the local authorities and the administration of the Act is supervised by a staff of inspectors attached to the Board of Health. Dairy premises are open to inspection at all reasonable times. At 31st December, 1922, there were 20,748 registered dairymen in the State, and the cattle in their dairy herds numbered 910,405; there were also 4,981 registered milk-vendors. In the metropolitan district there were 408 registered dairymen, with 9,816 cattle, and 4,085 registered milk-vendors. The standard for milk is fixed by regulation under the Pure Food Act which prescribes that it must be normal, clean and sweet, and taken from a cow which is healthy, fed properly and milked regularly; it must contain 8·5 per cent. of solids, not fat, and 3·2 per cent. of milk fat and must be free from any added substance. During 1922 inspectors collected 13,799 samples of milk, and 657 were found to be below standard; prosecutions were instituted in 230 cases and penalties in fines and costs amounting to £1,070 were imposed. The Dairy Industry Act is applied generally to the manufacture of butter, etc., in factories, and its provisions are stated in the chapter relating to the dairying industry.

About one-third of the milk supply of Sydney is derived from dairies within the metropolitan area and the balance from country districts, viz., the South

Coast district between Wollongong and Nowra, the districts traversed by the Main Southern Railway between Liverpool and Moss Vale, the Penrith, Windsor, and Richmond Districts, and the districts around Singleton, Brantxon, and Gosford, on the Northern Railway line.

The milk from the metropolitan dairies is distributed directly to the consumers who receive it within a few hours of milking, but the proportion of the supply from this source has decreased considerably, as the pressure of population and the demand for residential sites has caused the land used formerly for dairying to be diverted to other uses.

The milk from the country is handled for the most part by four distributing companies who take delivery from the producers at country railway stations; the time occupied by the journey from the most distant stations is about ten hours, the average time between milking and arrival in Sydney being between sixteen and twenty-four hours. The country milk is pasteurised before distribution, and in 1921-22 the companies distributed over 13,000,000 gallons of pasteurised milk in the metropolitan districts.

It is the opinion of the health authorities that under existing conditions the milk supply of Sydney and suburbs is not satisfactory, and that by the organisation of producers and distributors and by widespread propaganda, a great improvement could be effected to the benefit of both producers and consumers. The matter is under investigation by a select committee of the Legislative Assembly appointed in September, 1922. The Board of Trade also has conducted an inquiry in regard to this important food commodity; in its report, issued in June, 1923, it is indicated that the cost of milk to the consumer is increased appreciably by the overlapping of the retail distributing agencies, and to a greater extent, by the overlapping of the collecting functions of the wholesale distributing agencies, the actual cost of distribution as between producers and consumers, exclusive of the cost of pasteurisation and freight, being approximately 93 per cent. of the price paid to the producer. The Board recommended a complete reorganisation of the industry to enable a continuous and adequate supply of milk for consumption in the city to be produced in the closer country areas and collected, pasteurised, refrigerated and despatched to market by the farmers themselves under a system of co-operation. It was recommended also that the wholesale distributing agencies should become closely associated in order to facilitate the sanitation of the supply.

The prices of milk in Sydney have been doubled since 1901, as indicated in the following statement, which shows the wholesale price paid by the distributing companies to the farmer for milk delivered on trucks at country railway stations, and the retail price charged to the householder for country milk, and for fresh milk from the Metropolitan dairies. The prices were subject to Government control between 1915 and 1922:—

Year.	Wholesale.	Retail.		Year.	Wholesale.	Retail.	
		Country.	Fresh.			Country.	Fresh.
	per gal.	per qt.	per qt.		per gal.	per qt.	per qt.
	d. d.	d.	d.		d. d.	d.	d.
1901	6 to 7	4	4-5	1918	10 „ 15½	5½	6
1906	6 „ 7	4	4	1919	15½ „ 21½	5½-7½	6-9
1911	6 „ 9	4-5	5	1920	14 „ 18	7½-8½	8-10
1916	8 „ 12	5-5½	6	1921	13 „ 17	7½-8½	8½-10
1917	10 „ 12	5½	6	1922	13 „ 15	7½-8	8½-9

In 1922 the retail price for country milk was raised in May from 7½d. to 8d. per quart, and the price of local milk in June from 8½d. to 9d. The

wholesale price was 1s. 1d. per gallon from January to May, and from October to December; from May to October it was 1s. 3d. per gallon.

#### *Sugar and Jam.*

The quantity of sugar consumed (103·1 lb. per head) appears high, though it was 107·8 lb. or 4·7 lb. higher in 1901. The average consumption, as estimated, includes the quantities used in the manufacture of products such as jam and condensed milk, of which a proportion is exported. The records of the manufacturing industry in 1921-22 show that 5,729 tons of sugar (6 lb. per head) were used for jam and canned fruit; 3,068 tons (3·2 lb. per head) for biscuits; 1,087 tons (1·1 lb. per head) in condensed milk factories; 5,055 tons (5·3 lb. per head) in breweries; 2,775 tons (2·9 lb. per head) in aerated water factories; 7,942 tons (8·4 lb. per head) in making confectionery; and 1,112 tons (1·2 lb. per head) in making condiments, pickles, sauces, etc.

The average household consumption of sugar is estimated at 6 lb. per week for a family of five persons, or 62 lb. per head per annum.

In normal seasons sugar is produced in New South Wales and Queensland in sufficient quantity to supply local requirements; but in 1915, a shortage occurred, and in view of war conditions, the Commonwealth Government assumed control of the supply and has since made arrangements for importation, when necessary, and for the distribution of the total supply at fixed prices. In New South Wales, sugar is marketed under an agreement between the Commonwealth Government and the Colonial Sugar Refining Company, Limited. The company distributes the sugar, and delivers large quantities to the retailers upon the orders of wholesale merchants. The price paid at the Australian mills for raw sugar was fixed at £18 per ton in 1915, £21 in 1917, and £30 6s. 8d. in 1920; the charges granted to the Company have been varied in each season according to the prevailing conditions of the industry, the rates in the last three seasons being as follows:—For refining, 27s. per ton of raw sugar melted in 1920-21, 31s. in 1921-22, and 29s. in the following year; for selling, 7s. per ton; and for managing, 22s. 6d. per ton in 1920-21, and 20s. per ton in the succeeding years. The current agreement will expire on 30th June, 1923, and it has been proposed that the industry should form a pool, free from Government control, to buy raw sugar, to make arrangements for refining, and to provide sugar for the purpose of manufacturing goods for export at a price equal to the current world's parity.

The prices for refined sugar were fixed, in July, 1915, at £25 10s. per ton wholesale, and 3d. per lb. retail; in January, 1916, wholesale £29 5s. per ton, retail 3½d. per lb.; in April, 1920, wholesale £49 per ton, and retail 6d. per lb.; in November, 1922, the wholesale price was reduced to £42 per ton, and the retail to 5d. per lb.

Jams and preserved fruit are manufactured in Australia in larger quantities than the local demand can absorb; during the war there was a great expansion in production for export, but increases in prices led to a shrinkage in the local consumption of the factory-made article, though it encouraged home production, of which records are not available.

#### *Tea and Coffee.*

Tea enters largely into consumption among all classes, the average annual consumption being 7·8 lb. per head. Of coffee, on the other hand, the average was only 11 oz. per head. The consumption per head of tea and coffee has not varied materially.

The tea consumed in New South Wales is imported mainly from Ceylon and Java. During the three years ended June, 1922, Java furnished about 53 per cent. of the total importations; 35 per cent. was imported from Ceylon, 10 per cent from India, and only 2 per cent. from China. The corresponding figures for the three pre-war years, 1911-13, were Java 13 per cent., Ceylon

58 per cent., India 20 per cent., and China 9 per cent. The great bulk of the coffee is imported from Java and India and the importation from Java has increased considerably since 1913.

### *Vegetables and Fruit.*

The potato is the chief article of diet in the vegetable group, but it is subject to great fluctuation in supplies and in prices, and the consumption varies accordingly. Local production is inadequate, and large quantities are imported from Victoria and Tasmania. Imported potatoes are sold by private treaty on the wharf shortly after arrival, the wholesale prices being fixed by arrangement between the sellers; locally-grown potatoes are sold by auction in the railway yards. In 1911 the average retail price of potatoes in Sydney was 12½d. per 14 lb.; in 1921 it was 1s. 4½d., and in 1922 the average was 1s. 9½d.

Onions are imported in large quantities from Victoria. Other vegetables are obtained chiefly from local sources, the Sydney supplies being marketed at the City Council's market, where the growers sell their produce by private treaty.

The fruit supply is derived mainly from the local orchards, and from Victoria, Tasmania, and Queensland. From November or December to February or March the supply is for the most part grown locally; from March to October the market for all fruits except citrus is supplied chiefly from the other States, and from May to December local supplies of citrus fruits are available. Prior to the war bananas were imported in large quantities from Fiji, but in recent years the Tweed River district of New South Wales has become the chief source of supply; the local industry is protected by a duty of 1d. per lb.

In Sydney there are two fruit markets, viz., the Fruit Exchange, conducted by a private company, and the City Market, controlled by the City Council. Market sales are conducted generally by private treaty. The majority of the country and interstate distributors operate in the Fruit Exchange, which is exclusively a wholesale market. In the City Market, which has direct connection with the main railway system, a considerable amount of retail, as well as wholesale, trade is transacted, half the space being reserved for the use of growers, and the remainder let to agents.

On account of the numerous varieties and grades of fruit and vegetables, it is extremely difficult to ascertain satisfactory average retail prices, and on account of the large quantities grown in home gardens, it is, if anything, more difficult to estimate the local consumption. Moreover, details are not available regarding the production of the different kinds of vegetables in market gardens, the figures being included under a general heading.

Information relating to the wholesale prices of potatoes and of onions is shown in the chapter relating to agriculture, and the following statement shows, in regard to a few other varieties, the average wholesale prices in Sydney during the last seven years:—

Fruit and Vegetables.	1916.	1917.	1918.	1919.	1920.	1921.	1922
Apples, per bushel ..	6s. 6d. to 10s.	9s. to 13s.	8s. to 11s.	10s. to 15s.	9s. to 12s.	11s.	12s.
" cooking, per bushel ..	6s.	9s. 6d.	8s.	10s.	10s.	8s.	9s. 6d.
Oranges, per bushel ..	7s. 6d. to 15s.	7s. to 13s.	7s. to 14s.	10s. to 17s.	8s. to 15s.	14s.	10s. 6d.
Mandarins " ..	11s.	9s. 6d.	11s.	13s.	12s.	9s.	11s.
Pears " ..	11s.	9s. 6d.	12s.	13s.	12s.	11s.	13s. 6d.
Passion Fruit, per ½ bushel ..	6s. 6d.	7s.	10s.	10s. 6d.	11s.	12s.	15s. 6d.
Bananas, per ½ bushel ..	15s. 6d.	16s. 6d.	18s.	23s.	26s.	18s.	22s. 6d.
Pineapples " ..	7s. 6d.	9s.	9s. 6d.	12s.	14s.	12s.	14s.
Cabbages, per doz. ..	5s. to 7s.	6s. to 7s.	7s. 6d.	10s.	10s.	7s. 6d.	12s.
Cauliflowers " ..	7s. to 8s.	8s.	8s. 6d.	11s. 6d.	12s. 6d.	14s. 6d.	13s. 6d.
Peas, per bushel ..	7s.	8s.	9s. 6d.	11s.	11s. 6d.	12s.	12s.
Beans " ..	4s. to 5s.	5s. to 6s.	5s. 6d.	8s.	8s. 6d.	7s. 6d.	9s.

## WHOLESALE PRICES.

Information relating to wholesale prices in Sydney is published in detail in the "New South Wales Statistical Register"; the average prices in each year from 1901 to 1920 are published in the issue for 1919-20, and the monthly averages in later years are shown in subsequent issues. From the prices of 100 commodities which include the majority of items of importance in the economic life of the State, the index numbers shown in the following tables have been compiled to show the movement in wholesale prices in Sydney since 1901.

The commodities have been arranged in eight groups, and each commodity has been weighted according to the average annual consumption in New South Wales during the three years 1911-1913. Further details relating to the composition of the index numbers of wholesale prices are stated in the 1919 and 1920 issues of the Year Book, e.g., the grade of the articles or commodities included, the source of information as to prices, and the weights applied.

The wholesale price index numbers in various years since 1901 are shown in the following statements; the numbers for intervening years not included in the tables are published in the 1921 issue of the Year Book; the prices in the year 1911 have been used as a base and called 1,000.

The index numbers of each group and of all groups combined are as follows; it should be noted that the indexes are not comparable between groups except to illustrate the respective changes in price:—

Year.	I. Agricultural Produce.	II. Groceries	III. Wool, Cotton, Leather, Jute.	IV. Metals and Coal.	V. Building Materials	VI. Meat.	VII. Dairy Produce.	VIII. Chemicals.	All Commodities.*
1901	834	949	737	1001	745	1222	963	977	904
1906	929	960	937	996	806	1163	953	951	955
1911	1000	1000	1000	1000	1000	1000	1000	1000	1000
1912	1339	1036	968	1001	1079	1323	1133	980	1129
1913	1069	1033	1043	1039	1107	1379	1093	1033	1092
1914	1135	1016	1009	1079	1105	1669	1128	1220	1137
1915	1648	1099	976	1270	1137	2596	1349	1426	1401
1916	1163	1245	1367	1725	1241	2896	1380	1617	1459
1917	1127	1298	2093	2358	1421	3007	1440	1956	1727
1918	1377	1405	2614	2740	1685	2616	1487	2605	1933
1919	1990	1492	2501	2454	1879	2873	1718	2089	2090
1920	2430	1914	3079	2602	2415	3113	2236	2301	2503
1921	1750	1941	1471	2511	2259	1921	2020	1863	1956
1922	1638	1839	1628	2164	2074	1513	1735	1668	1800

\* Weighted average.

Prices were at the lowest point at the beginning of the period under review, and with some fluctuation they rose slowly until 1911; subsequently the upward movement was almost constant until 1920 when the index number was 150 per cent. higher than in 1911. The greatest increases were 23 per cent. in 1915, 16 per cent. in 1917, and 20 per cent. in 1920. In 1921 there was a decrease of 22 per cent., a marked drop having taken place in several groups, viz., wool, cotton, etc., 52 per cent., meat 38 per cent. and agricultural produce 28 per cent. In 1922 there was a further decrease of 8 per cent., and the index numbers were lower in all the groups except wool, etc., which rose by 11 per cent. Meat prices were reduced, on an average, by 21 per cent., metals and dairy produce by 14 per cent., and chemicals by 10 per cent., with smaller reductions in the other groups.

The general level of wholesale prices reached the maximum in July, 1920, viz., 170 per cent. higher than in the year 1911; then the index number dropped steadily until February, 1922, when it was 40 per cent. lower. Then a slow upward tendency became apparent in consequence of higher prices in the textile group and of seasonal variations in regard to meat and dairy produce; the rise continued until September, when the movement became irregular, but the index number at the end of the year was 6 per cent. higher than at the beginning.

The following table gives the monthly index numbers for each group from January, 1922, to June, 1923, from which the movement month by month may be gauged:—

Month.	I. Agricultural Produce.	II. Groceries	III. Wool, Cotton, Leather, Jute.	IV. Metals and Coal.	V. Building Materials	VI. Meat.	VII. Dairy Produce.	VIII. Chemicals.	All Commodities.
1922.									
January ...	1521	1907	1445	2260	2174	1549	1570	1795	1771
February ...	1478	1901	1403	2251	2148	1337	1533	1666	1722
March ...	1511	1881	1451	2253	2121	1249	1538	1677	1724
April ...	1523	1873	1465	2233	2075	1291	1638	1670	1733
May ...	1631	1870	1579	2170	2076	1279	1877	1670	1785
June ...	1601	1874	1691	2197	2076	1291	1875	1670	1799
July ...	1603	1867	1721	2155	2076	1549	1981	1670	1833
August ...	1717	1866	1697	2120	2074	1731	1901	1670	1859
September ...	1752	1865	1730	2100	2020	1725	1904	1638	1861
October ...	1721	1865	1709	2079.	2016	1754	1761	1641	1837
November ...	1700	1773	1804	2031	2020	1627	1632	1624	1806
December ...	1895	1773	1845	2075	2011	1779	1615	1619	1866
1923.									
January ...	1669	1778	1934	2124	2006	1772	1734	1565	1847
February ...	1639	1779	1981	2122	2001	1488	1818	1559	1827
March ...	1710	1775	2010	2139	2009	1554	1912	1546	1864
April ...	1772	1769	2014	2146	2009	1524	2099	1513	1893
May ...	1796	1769	2010	2145	2006	2006	2123	1528	1936
June ...	1860	1770	1991	2135	2005	2398	2077	1507	1990

The movement in the prices of Australian products is compared with the changes in respect of imported goods in the following statement. The prices of local products are affected to a great extent by local seasonal conditions, though the prices of such commodities as wool, wheat, and metals are practically fixed in the countries to which they are exported in large quantities:—

Year.	Australian Products.	Imported Goods.	All Com- modities.	Year.	Australian Products.	Imported Goods.	All Com- modities.
1901	903	906	904	1918	1675	2433	1933
1906	955	955	955	1919	1993	2283	2090
1911	1000	1030	1000	1920	2354	2799	2503
1916	1481	1509	1480	1921	1866	2136	1956
1917	1580	2003	1727	1922	1722	1950	1800

The increase in the prices of imported goods was more pronounced than the rise in prices of local products. After the end of the war the prices of imported goods fell for a time, but the upward movement of the prices of local

products continued. In 1920 the price-level of Australian products increased by 18 per cent., and of imported articles by 23 per cent.; in 1921 there were decreases of 21 per cent. and of 24 per cent., and in 1922 of 8 per cent. and of 9 per cent. in the respective index numbers.

The average wholesale prices in Sydney of thirty-one commodities, which are representative of the various groups, are shown in the following statement; the quotations represent the mean of the monthly prices except in the case of wool and cotton. For the former it was not practicable to determine an average commercial price for the years when the Imperial purchase scheme was in operation, and the average import value into Great Britain of Australian wool is stated instead; for cotton Liverpool (England) prices are stated.

Commodity.	1901.	1906.	1911.	1914.	1920.	1921.	1922.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Wheat, milling .. .. bush.	2 8	3 3·4	3 6	4 1·4	8 7·2	8 7·9	5 8
Flour .. .. . ton	126 5	151 5	169 9	183 5	370 7	338 7	246 9
Chaff, wheaten .. .. "	65 0	74 2	81 0	100 7	212 11	128 9	136 8
Hay, oaten .. .. "	75 0	71 2	94 5	97 2	233 9	151 11	177 8
Potatoes .. .. . "	101 10	139 7	111 5	94 7	216 3	119 0	152 6
Sugar .. .. . "	442 5	414 0	437 6	430 10	381 3	980 0	956 8
Tobacco, dark plug .. lb	4 0	5 0	5 0	5 0	7 8·3	8 2	8 2
Tea .. .. . "	1 1·5	1 1·5	1 1·5	1 1·5	2 1·9	2 1	2 1
Soap .. .. . 40 lb.	14 6	16 0	18 4	18 4	32 10·5	28 9	27 6
Jam .. .. . 20 "	9 6	7 2	6 10	7 10	13 3	13 2·5	13 0
Kerosene .. .. . 8½ gal.	6 3	7 2	7 3	7 11	20 0·8	20 7·3	14 0·5
Cotton .. .. . lb.	0 4·7	0 5·9	0 7	0 6·4	2 1·8	0 10·4	1 0·7
Wool .. .. . "	0 3·3	0 11	0 10·8	0 11·2	2 0·4	1 1·5	1 2·5
Leather, sole .. .. "	0 9·9	1 1·3	1 1·7	1 2·7	2 9·2	1 11·2	1 9·9
Woolpacks .. .. each	1 11·6	2 4·2	2 4	3 7	6 3·5	3 8·6	4 4·4
Iron—Pig, local .. .. ton	81 7	76 7	78 4	81 0	165 5	182 6	150 0
Plate, girder .. .. "	269 2	235 0	233 4	265 4	706 8	676 8	526 8
Corrugated, gal... .. "	360 10	382 1	346 8	387 6	1239 7	979 2	663 4
Copper, sheet .. .. lb.	1 2	1 1·1	0 10·5	0 11·3	2 2·5	2 1·5	1 6
Coal .. .. . ton	11 9	12 10	13 10	14 2	26 8	30 4·0	31 1
Hardwood, local (3 x 2) 100 lin. ft.	6 0	7 0·7	8 6	9 5·5	13 0	18 0	17 4
Pine—Local (4 x 1) 100 sup. ft.	17 0	19 8	25 5	27 5	61 2	62 0	61 0
N.Z. (4 x 1) .. .. "	20 3	21 1	22 2	24 0	60 4	62 0	53 7
Oregon (4 x 1) .. .. "	12 6	14 10	15 7	13 1·5	64 2	47 1	35 5
Bricks .. .. . 1,000	33 6	34 0	42 0	45 9	30 9	63 0	71 9
Beef—Fore .. .. lb.	0 2·4	0 2·2	0 1·7	0 3	0 4·9	0 2·2	0 1·4
Hinds .. .. . "	0 8·4	0 3·1	0 2·7	0 3·9	0 8·5	0 5·6	0 4
Mutton .... .. "	0 2·2	0 2·3	0 2	0 3·7	0 6·7	0 4·2	0 3·9
Butter .. .. . "	0 10·6	0 10·7	0 10·6	0 11·6	2 1	1 9·6	1 7·1
Eggs, new laid .... doz.	1 3·4	1 0·6	1 4	1 4·6	2 4·6	2 3·3	2 1
Cream of tartar .. .. lb.	0 10·6	0 9·4	0 11·2	1 3	3 4	2 0	1 5·6

With the exception of coal, bricks, and tobacco, all the commodities enumerated have fallen in price during the last two years, though the average prices of fodder and of potatoes were higher in 1922 than in the previous year.

*Comparison with Other Countries.*

The following statement shows the wholesale price index numbers for various parts of the British Empire and for the United States of America, with 1911 as common base, and affords an interesting comparison of the manner in which wholesale prices have varied during recent years :—

Year.	New South Wales. (Sydney). [Bureau of Statistics.]	Victoria. (Melbourne). [Common- wealth Bureau of Census and Statistics.]	New Zealand. [Census and Statistics Office.]	Canada. [Department of Labour.]	United Kingdom. [Board of Trade.]	United States of America. [Bureau of Labour.]
Number of Commodities.	100	92	106	271	45-150	234-404
1901	904	974	937	840	883	833
1906	955	948	1022	942	921	927
1911	1000	1030	1000	1000	1000	1000
1916	1489	1504	1388	1429	1705	1336
1917	1727	1662	1564	1860	2220	1862
1918	1933	1934	1820	2185	2443	2041
1919	2090	2055	1845	2302	2708	2167
1920	2503	2480	2198	2657	3273	2378
1921	1956	1903	2084	1933	2100	1546
1922	1800	1758	1843	1761	1688	1567

Prices had been increasing steadily in all countries for many years before the war, and the effect of the war on prices was less marked in the countries more remote from the centre of conflict. In every case there was a general increase in prices after the cessation of hostilities; the peak was reached during 1920, and there has since been a very marked decline. As compared with the wholesale prices in 1913, the index number in 1922 was higher in all the countries enumerated, viz., United States by 49 per cent.; United Kingdom, 58 per cent.; Victoria, 62 per cent.; New South Wales, 65 per cent.; Canada, 66 per cent.; and New Zealand, 78 per cent.

Some of the index numbers as shown in the table for the United Kingdom and for the United States have been altered since the last issue of the Year Book, in consequence of revision by the authorities responsible for their determination.

## RETAIL PRICES.

The average retail prices in Sydney of various commodities, as shown in this chapter, are based on the prices charged in shops in the metropolitan district, and the annual averages represent the mean of the monthly prices during each year.

The following statement shows the averages for various years since 1901; the averages for each year from 1901 to 1920 are shown in the 1919-20 issue of the "Statistical Register of New South Wales."

The table is useful for comparative purposes in regard to the measurement of the general change in prices, but the figures do not disclose a most interesting feature in a history of prices, namely, the fluctuations during the year, which are pronounced, especially in the case of perishable



produce. For such information readers are referred to the "Statistical Registers," where the average monthly prices are shown.

Commodity.	1901.	1911.	1913.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Bread .. .. 2lb. loaf	0 2 5	0 3 5	0 3 5	0 4 0	0 4 0	0 4 0	0 4 2	0 5 0	0 6 2	0 4 7
Flour .. .. 25lb.	1 11 0	2 9 0	2 10 0	3 6 1	3 4 1	3 7 4	3 10 1	6 0 4	6 1 6	4 4 1
Tea .. .. lb.	1 3 0	1 3 5	1 3 8	1 6 1	1 6 2	1 6 7	1 8 0	2 4 5	1 10 7	1 11 2
Coffee .. .. "	1 5 0	1 5 0	1 5 5	1 6 0	1 6	1 6 1	1 7 8	2 2 6	1 11 0	1 11 2
Sugar .. .. "	0 2 3	0 2 7	0 2 7	0 3 5	0 3 5	0 3 5	0 3 5	0 5 4	0 5 7	0 5 3
Rice .. .. "	0 2 5	0 2 7	0 3 0	0 3 2	0 3 3	0 3 4	0 5 2	0 7 4	0 4 9	0 3 6
Sago .. .. "	0 2 5	0 2 7	0 3 2	0 3 2	0 3 9	0 4 7	0 5 4	0 5 6	0 3 6	0 3 6
Jam (Australian) .. .. "	0 4 0	0 4 4	0 5 0	0 6 0	0 5 7	0 5 7	0 6 0	0 9 1	0 10 0	0 10 7
Oatmeal .. .. 5lb.	0 11 3	1 0 5	1 2 3	1 2 6	1 1 4	1 5 6	1 10 3	2 2 1	1 8 0	1 7 3
Raisins .. .. lb.	0 6 2	0 6 2	0 6 4	0 7 7	0 7 7	0 8 2	0 8 7	0 10 7	0 11 5	0 11 3
Currants .. .. "	0 6 6	0 7 0	0 7 2	0 9 1	0 8 2	0 8 6	0 8 9	0 11 0	0 11 1	0 11 2
Starch .. .. "	0 4 0	0 5 5	0 5 4	0 6 4	0 7 0	0 6 9	0 7 6	0 10 2	0 9 7	0 8 5
Blue .. .. 12 squares	0 9 0	0 9 0	0 9 0	0 9 2	0 9 5	1 3 6	1 5 0	1 5 0	1 4 7	1 4 7
Candles .. .. lb.	0 5 5	0 6 5	0 6 5	0 8 0	0 9 3	0 10 4	0 11 3	1 2 2	1 1 0	1 1 5
Soap .. .. "	0 2 5	0 3 0	0 3 3	0 3 4	0 4 0	0 4 4	0 5 3	0 7 0	0 5 0	0 4 5
Potatoes .. .. 14lb.	0 11 3	1 0 2	1 0 8	1 0 5	1 4 3	1 5 2	2 8 9	2 2 5	1 4 5	1 9 2
Onions .. .. lb.	0 1 4	0 0 7	0 1 3	0 1 1	0 1 9	0 2 8	0 2 7	0 3 0	0 1 5	0 2 2
Kerosene .. .. gal.	0 10 1	0 11 1	0 5 2	0 5 3	0 6 0	0 6 0	0 7 0	0 7 9	0 8 2	0 8 3
Milk .. .. quart	0 4 0	0 4 4	0 5 2	0 5 3	0 6 0	0 6 0	0 7 0	0 7 9	0 8 2	0 8 3
Butter .. .. lb.	1 0 2	1 1 7	1 1 8	1 5 3	1 0 7	1 7 0	1 9 9	2 4 4	2 0 7	1 10 2
Cheese .. .. "	0 7 5	0 8 7	0 8 5	1 0 1	1 0 3	1 1 3	1 8 8	1 5 5	1 3 0	1 1 9
Eggs, Fresh .. .. doz.	1 3 0	1 3 5	1 5 1	1 6 4	1 4 7	1 5 8	1 10 7	2 6 9	2 6 5	2 2 9
Bacon, Middle Cut .. lb.	0 9 0	0 10 5	1 0 7	1 4 5	1 4 3	1 4 5	1 6 3	1 11 9	1 10 9	1 7 4
Shoulder .. .. "	0 6 5	0 7 0	0 8 7	1 0 4	0 11 5	0 11 5	1 2 0	1 6 1	1 4 5	1 0 7
Ham .. .. "	0 11 0	1 1 0	1 2 0	1 5 5	1 5 4	1 5 9	1 8 1	2 3 0	2 0 9	1 9 9
Beef, Sirloin .. .. "	0 4 5	0 4 5	0 5 0	0 11 1	0 11 1	0 10 2	0 11 1	0 11 5	0 9 1	0 8 2
Ribs .. .. "	0 3 8	0 3 8	0 4 5	0 9 5	0 9 5	0 9 2	0 9 4	0 9 9	0 6 7	0 5 6
Gravy .. .. "	0 2 0	0 3 0	0 3 5	0 7 6	0 8 0	0 7 2	0 6 3	0 7 2	0 4 8	0 2 8
Steak, Rump .. .. "	0 7 0	0 7 0	0 7 9	1 1 8	1 2 6	1 2 3	1 4 9	1 4 9	1 2 0	1 0 9
Shoulder .. .. "	0 3 5	0 3 5	0 3 5	0 8 5	0 9 0	0 8 8	0 9 1	0 10 1	0 6 9	0 4 7
Beef, Corned Round .. "	0 4 0	0 4 0	0 4 4	0 9 8	0 9 5	0 9 0	0 9 6	0 10 2	0 8 1	0 6 5
Mutton, Leg .. .. "	0 3 2	0 3 0	0 3 8	0 7 8	0 8 2	0 7 8	0 7 8	0 8 8	0 6 9	0 5 9
Shoulder .. .. "	0 2 3	0 2 5	0 3 1	0 6 7	0 7 1	0 6 8	0 6 7	0 7 2	0 5 2	0 4 1
Loin .. .. "	0 3 8	0 3 8	0 4 0	0 7 9	0 9 1	0 8 4	0 8 6	0 9 3	0 7 6	0 6 5
Neck .. .. "	0 3 2	0 3 0	0 3 5	0 7 0	0 7 9	0 6 9	0 7 0	0 7 4	0 5 4	0 3 6
Chops, Loin .. .. "	0 4 2	0 4 0	0 4 7	0 9 0	0 10 0	0 10 0	0 10 4	0 10 5	0 8 6	0 8 5
Leg .. .. "	0 3 8	0 3 8	0 4 7	0 8 6	0 9 6	0 9 1	0 9 3	0 10 0	0 8 1	0 7 4
Neck .. .. "	0 3 2	0 3 0	0 4 0	0 7 3	0 7 6	0 6 8	0 7 4	0 8 3	0 6 4	0 5 5
Pork, Leg .. .. "	0 6 2	0 7 8	0 8 5	1 0 1	1 1 1	1 1 3	1 1 2	1 5 4	1 3 4	1 0 7
Chops .. .. "	0 6 8	0 8 5	0 9 6	1 0 1	1 3 5	1 2 6	1 2 1	1 6 0	1 5 8	1 2 0

The annual average of the retail prices of most food commodities reached a maximum in 1920, and prices in the following year were much lower; there were, however, exceptions including the prices of commodities which are amongst the most important articles of diet, viz., bread, flour, sugar, jam, and milk.

#### HOUSE RENTS.

The average amount of rent paid by tenants of various types of houses in Sydney and suburbs in 1901 and later years is shown below. The figures represent the average predominant rents per week paid for each class of house; the range of rents varies considerably according to locality, and position, class of building, proximity and means of speedy transport to the city are important factors in respect of rents in the suburbs.

Year.	Under Four Rooms.	Four Rooms.	Five Rooms.	Six Rooms.	Seven Rooms.	Over Seven Rooms.	Weighted Average.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1901	9 0	11 1	13 7	15 4	19 1	22 2	13 5
1906	9 2	11 7	14 0	16 9	19 1	22 6	13 11
1911	11 4	14 5	17 1	20 2	23 3	26 10	17 0
1916	12 3	14 8	17 11	21 6	24 6	29 8	18 11
1917	12 3	14 9	17 10	20 11	24 6	29 4	19 0
1918	12 6	15 4	18 6	21 9	24 11	29 7	19 6
1919	12 8	15 9	18 11	22 5	25 8	31 2	20 1
1920	13 10	17 8	20 8	24 3	28 4	34 3	22 1
1921	14 2	18 4	21 7	25 2	29 7	35 9	23 0
1922	15 4	19 6	22 6	26 0	31 2	36 3	24 0

Note.—Kitchen is included as a room.

Between 1901 and 1914 rents in Sydney and suburbs increased by nearly 50 per cent., but the war had a steadying effect, and the next three years showed a slight decrease. The operations of the Fair Rents Court in Sydney tended to keep rents from rising above pre-war level; and regulations were issued by the Commonwealth Government under the War Precautions Act, prohibiting any increase in the rent of a house occupied by a member of the Expeditionary Forces, or by a parent or female dependent of a member, except by leave of a competent Court.

In 1918, however, the rents began to increase owing to a shortage of houses, the deficiency being attributed to the practical cessation of investment building, on account of the high price of both materials and labour. In 1920 there was a marked increase in building activities, but the supply was still short of the demand, and there was a rise of 10 per cent. in the average rental during the year. There was a further rise of 4 per cent. in each of the two following years, and in 1922 the average was 20 per cent. higher than in 1914.

Information was collected at the Census of 1921 regarding the rents paid in various localities throughout the State, and the following statement contains a summary of the particulars relating to the rentals of private dwellings (excluding tenements, flats, and boarding-houses) containing from 3 to 6 rooms and occupied by tenants at the date of the Census, 4th April, 1921 :—

Districts.	Average Rental Values, 4th April, 1921.				
	Three Rooms.	Four Rooms.	Five Rooms.	Six Rooms.	Three to Six Rooms.
	s. d.	s. d.	s. d.	s. d.	s. d.
Metropolitan ... ..	12 8	17 1	20 10	24 10	19 9
Urban Provincial ... ..	10 5	12 3	14 4	16 10	13 10
Rural ... ..	8 5	9 6	11 0	12 6	10 6
Total, New South Wales ..	11 3	14 2	17 1	20 8	16 4

The average rental values for the very small houses in the Metropolitan district at the Census in April, 1921, was somewhat lower than the average rentals in the year 1920, as shown in the preceding table of annual averages, though rents were rising slowly at that time. The difference is due to the fact that the Census records relate to all houses in the groups specified, while the annual averages relate to the predominant rents of ordinary houses in a fair situation, and in a good state of repair, exclusive of those whose value is enhanced by reason of favourable situation, or other special circumstances, and of houses which are old or inconveniently situated; apparently the latter description applies to a larger proportion of the very small than of the larger houses.

In the Metropolitan district the average rental of houses containing from 3 to 6 rooms ranged from 13s. 9d. in Botany to £1 8s. 1d. in Manly. In the densely populated areas close to the city the average was from 15s. 2d. to 17s. 6d. In the residential suburbs within half-an-hour's journey along the western railway and tramway lines, the average was generally between £1 and £1 3s. In the suburbs clustering around the southern shores of the harbour and near the ocean beaches to the south of Port Jackson, the average was from £1 3s. to £1 6s. 6d.; the average in the northern suburbs with access to the shores of the harbour or ocean was from £1 2s. per week to

£1 8s. per week. Along the Illawarra suburban railway line the rents showed a tendency to decrease as the distance from the city increased, the average in the nearer suburbs being about 20s. per week. Beyond the metropolis in the industrial areas from Lidcombe to Parramatta, the average was between 15s. 3d. and 16s. 9d.

In the district of Newcastle the average in the city was 17s. 9d.; the more populous of the surrounding municipalities showed the following rates, viz., Waratah 19s. 2d., Hamilton 18s. 8d., Wickham 15s. 4d. The lowest average, 8s. 6d., was in Wallsend, distant 8 miles from the city, and in the other municipalities the average ranged from 10s. 9d. to 14s. 8d., except in Stockton, where it was 16s. 1d.

The average rentals in other important centres of population were as follows:—Broken Hill 11s. 10d., Lithgow 15s. 8d., Goulburn 17s. 9d., Maitland, 11s. 9d., Bathurst 13s. 8d., Lismore 16s. 1d., Albury 17s., Wagga 17s. 3d.

### *Cost of Building.*

The increased cost of building has been an important factor in causing the upward movement in house rents; the extent of the increase is indicated in the following comparison which shows the cost of building in Sydney, in various years since 1901, a plain brick cottage with 4 rooms, kitchen, bathroom, pantry, and back and front verandahs, complete with bath, laundry fittings, gas stove, fencing, water and sewerage. No allowance has been made for the builder's profit, and the cost of the land has not been included. The comparison is based on the assumption that the quantity of materials and of labour, as in the month of July, was equal in each year, except that in the last three years the estimates are based on the prices and rates ruling in the month of June.

Year.	Cost of—			Proportion of Total Cost.		Index-number of Cost. 1911=1,000.		
	Materials.	Labour.	Total.	Materials.	Labour.	Materials.	Labour.	Total.
	£	£	£	per cent.	per cent.			
1901 ... ..	181	100	281	64	36	797	833	810
1911 ... ..	227	120	347	65	35	1000	1000	1000
1914 ... ..	255	133	388	66	34	1123	1108	1118
1920 ... ..	483	221	704	69	31	2128	1842	2029
1921 ... ..	482	225	707	68	32	2123	1875	2037
1922 ... ..	449	220	669	67	33	1978	1833	1928
1923 ... ..	441	208	649	68	32	1943	1733	1870

Between 1901 and 1911 there was an increase of 23 per cent. in the cost of building, with a further rise of 18 per cent. during the succeeding three years. In 1920 the cost was 81 per cent. above pre-war level, and it was slightly higher in the following year, then a decrease of about 5 per cent. occurred. The cost of materials increased more than wages until 1920; since that year materials have become cheaper, but the wages cost in June, 1922, was about the same as it was two years ago.

Particulars are given in the chapter relating to Social Condition concerning the number of new buildings erected and schemes for assisting people to build dwellings.

*Fair Rents Act.*

In view of a continuous rise in the rents of private dwellings which had persisted for some years prior to the war, the Fair Rents Act was passed in 1915 to provide a measure of regulation with the object of preventing undue increases in this important item of family expenditure.

The Act and its amendments provide for the determination of rents of dwellings leased for a term not exceeding three years, at a rent not exceeding £156 per annum, and of dwellings which had been let during the period of six months prior to the passing of the Act, at a rent not exceeding £156 per annum; but it does not apply to houses ordinarily leased for summer residence. It is administered by Fair Rents Courts, each consisting of a stipendiary or police magistrate, and application for the review of the rental of a dwelling may be made by the lessor or by the lessee. In accordance with the provisions of the Act, the fair rent is fixed on the basis of the capital value at a rate not lower, nor more than  $2\frac{1}{2}$  per cent. higher, than the rate charged on overdrafts by the Commonwealth Bank of Australia, plus rates, taxes, repairs, maintenance, insurance, and depreciation; the capital value is the unimproved capital value of the land plus the estimated cost of erection as at the date of the application, less a fair sum for depreciation, and, it has been the practice of the Court to use a rate of  $6\frac{1}{2}$  per cent. of the capital value in determining the fair rent. It is prescribed, however, that, excepting where circumstances are proved which render an increase equitable, the fair rent may not exceed the rent which was charged for the dwelling on 1st January, 1915, and in the cases of dwellings leased at that date the Court allows only such increases as are necessary to cover increases in respect of rates, taxes, repairs, etc.

The determinations of the Court remain in force for a period not less than twelve months and not longer than three years as specifically stated, notwithstanding change of ownership or tenancy; and during the pendency of an application or the period of six months after decision, the lessor may not determine the lease without reasonable cause if the lessee performs the conditions of his lease. The Court usually fixes the rentals for a term of twelve months.

The first sitting of the Fair Rents Court in Sydney was held on the 13th March, 1916, and the provisions of the Act were extended to country districts on 16th August, 1920. The records show interesting particulars relating to dwellings and rentals, but for several reasons the information cannot be regarded as a satisfactory basis for conclusions as to the effect of the Fair Rents Act upon house rents. For instance, in cases where the tenant applies promptly upon receiving notice of the landlord's intention to increase the rent, the "fair rent" as determined by the Court may be recorded as an increase on the rent at date of application, whereas it is a reduction in comparison with the proposed increased rental against which the action was directed.

The applications dealt with in the Metropolitan district from the inception of the Court to 31st March, 1923, numbered 4,636, of which 1,854 were withdrawn or struck out, and in 2,782 cases the rentals were fixed. In the country districts the number of cases was comparatively small; only 165 were concluded between August, 1920, and 31st December, 1922; 67 were withdrawn, and in 22 cases the rent was fixed as at date of application, in 41 it was reduced, in 35 it was increased. Further details regarding the number of cases are shown in the chapter relating to Law Courts.

The determinations of the Metropolitan Court in respect of cases in which the rentals were fixed during the year 1922-23 and during the period of

seven years since the commencement of its operations, are summarised in the following table:—

Rent (at date of Application).	Year ended 31st March, 1923.				Total to 31st March, 1923.			
	Fixed as at date of Application.	Increased.	Reduced.	Total.	Fixed as at date of Application.	Increased.	Reduced.	Total.
10s. and under ...	2	...	...	2	13	14	15	42
10s. 6d. to 12s. 6d.	1	6	4	11	23	53	59	135
13s. to 15s. ...	8	32	17	57	66	137	203	406
15s. 6d. to 17s. 6d.	12	10	16	38	68	156	179	403
18s. to 20s. ...	11	24	28	63	102	179	176	457
20s. 6d. to 25s. ...	21	31	62	114	104	304	263	668
25s. 6d. to 30s. ...	7	22	43	72	47	140	155	342
30s. 6d. to 40s. ...	2	21	39	62	22	59	137	218
40s. 6d. to 50s. ...	...	3	16	19	9	12	56	77
50s. 6d. to 60s. ...	...	1	6	7	6	1	22	29
Over 60s. ...	...	...	2	2	...	...	5	5
Total ..	64	150	233	447	469	1,055	1,267	2,782

During 1922-23 the Court granted increases in 34 per cent. of the decisions, and reductions in 52 per cent.; the total increases to 31st March, 1923, represented 38 per cent., and the total reductions 46 per cent.

The majority of dwellings affected by the decisions of the Court were small, and the rents did not exceed £1 5s. per week. The average of the rentals reviewed in the Metropolitan Court during the year ended March, 1923, was 25s. 1d. per week, as compared with 25s. 3d. in the previous year.

The amount of reduction and of increase in the rents of dwellings in the Metropolitan district during the year 1921-22 may be seen in the following statement:—

Amount of Reduction, or of Increase.	Rents Increased.	Rents Reduced.	Amount of Reduction, or of Increase.	Rents Increased.	Rents Reduced.
6d. and under.	17	29	3s. 6d. and under 4s.	7	8
1s. ,, 1s. 6d.	23	15	4s. ,, 5s.	22	16
1s. 6d. ,, 2s.	14	26	5s. ,, 6s.	11	29
2s. ,, 2s. 6d.	9	14	6s. ,, 10s.	10	34
2s. 6d. ,, 3s.	22	21	10s. and over ...	6	28
3s. ,, 3s. 6d.	9	13	Total ...	150	233

The reductions amounted to a sum of £54 3s. 8d. per week, which represents an average of 16.9 per cent., or 4s. 8d. per house per week. In 150 cases the rents were increased, the total increases amounting to £23 14s. 9d. per week, equal to 13.7 per cent., or 3s. 2d. per house.

The weekly rents reviewed by the Court during 1922-23 amounted in the aggregate to a sum of £560 7s. 5d., the net reduction being £30 8s. 11d., or 6·4 per cent.

#### RETAIL PRICE INDEX NUMBERS—FOOD AND RENT.

The index numbers of the prices of food and of rent shown in this section should not be used as a complete measure of variations in the cost of living, as they were compiled with the primary object of showing the general movement of the retail prices of food and of rent, and do not cover other items of family expenditure. In measuring a movement in prices over a period of years, changes in dietary each year cannot be taken into account in computing the index numbers; the price of each food commodity must be weighted over a series of years in accordance with its relative importance in a fixed regimen as determined in or around the basic year. In reviewing prices over a long period there is a probability of a discrepancy between the rise or fall of the index numbers and the increase or decrease in the actual expenditure of a household on food. During abnormal years, when violent fluctuations in prices and supplies necessitate changes in the kinds, quality, and relative quantities of the various foods, and an adjustment of the family dietary, the discrepancy is likely to be wider than under normal conditions. Variations in the cost of food on the basis of a changed regimen is shown on page 432.

The index numbers of food and groceries, as shown below, are based upon the retail prices of forty commodities in every-day use, which are shown in the table on page 423, and the prices have been weighted according to the average annual consumption in the years 1906-10.

In the 1920 issue of the "Year Book," the retail price index numbers of food and rent in Sydney in each year from 1864 to 1920 are published, with a brief review of industrial conditions during the period; the following table shows the index numbers of food and groceries, and of rent, and of food and groceries and rent combined in various years since 1901:—

Year.	Index Numbers (1911=1000).			Amount required in each period to purchase the same quantities of Food and Rent as would have cost, on the average, 20s. in 1911.
	Food and Groceries.	Rent.	Food and Groceries and Rent Combined.	
1901 ... ..	896	789	848	s. d. 17 0
1906 ... ..	967	819	901	18 0
1911 ... ..	1000	1000	1000	20 0
1916 ... ..	1503	1113	1328	26 7
1917 ... ..	1550	1118	1356	27 1
1918 ... ..	1560	1147	1375	27 6
1919 ... ..	1763	1181	1502	30 0
1920 ... ..	2121	1299	1752	35 0
1921 ... ..	1899	1353	1654	33 1
1922 ... ..	1743	1412	1594	31 11

Prices of food are affected largely by seasonal conditions, but, even before the war, the trend of prices was generally upwards, and when a bad season, *e.g.*, in 1902 and in 1908, caused a marked rise, prices did not fall to the former level with the return of good seasons; the upward movement being world-wide cannot be ascribed to local causes. Rents also rose steadily during the period of prosperity which preceded the war.

In 1914 and subsequent years, when drought, enlistments, and disorganisation due to the war steadily reduced the productive activity of the population, prices rose abnormally on account of a strong demand for raw materials overseas, and of a scarcity of manufactured goods. From 1918 to June, 1920, unseasonable conditions existed, and the year 1920 marked the beginning of a general process of deflation.

In 1921 a favourable season was experienced and the wheat harvest was marketed at a high price, but the effects of world-wide commercial and industrial depression were apparent, causing unemployment in many industries. A drop occurred in the prices of food and groceries, and the index number declined by 10 per cent.; rents continued to rise, and the cost of food and rent combined was 6 per cent. lower than in the previous year. In 1922 the index number of food and groceries showed a further decline of 8 per cent., but rents rose by 4 per cent., and the index number of both groups combined was lower by 4 per cent. than in the previous year.

The variations in the retail prices of food and groceries and in rents in each month since January, 1913, are shown below in comparison with the prices in July, 1914, the month before the outbreak of war.

Information regarding rent is obtained quarterly, therefore it has been assumed that the average rent for the quarter was the rent for the middle month of the quarter, and figures for the intervening months have been interpolated. The retail prices and rents in July, 1914, have been taken as a base and called 1000.

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Food and Groceries.												
1913	937	954	970	963	943	958	953	939	928	932	935	933
1914	953	984	1017	1007	1000	1003	1000	998	955	981	967	1027
1915	1049	1040	1057	1082	1119	1175	1269	1391	1332	1338	1273	1306
1916	1288	1328	1313	1293	1310	1313	1336	1316	1316	1306	1316	1310
1917	1313	1338	1343	1348	1324	1316	1321	1381	1410	1405	1377	1359
1918	1372	1376	1362	1352	1362	1351	1343	1311	1328	1368	1397	1426
1919	1470	1494	1512	1507	1519	1523	1520	1534	1518	1585	1639	1634
1920	1651	1698	1708	1812	1831	1912	1961	1963	2014	1930	1825	1853
1921	1852	1839	1790	1686	1649	1624	1629	1618	1608	1577	1557	1591
1922	1484	1461	1460	1482	1503	1498	1558	1595	1587	1553	1535	1545
1923	1547	1511	1499	1568	1586	1640	1665					
Rent.												
1913	940	946	946	971	971	971	971	971	971	992	992	992
1914	992	992	996	1000	1000	1000	1000	1000	1000	1000	988	975
1915	959	954	950	946	946	946	946	946	946	946	942	938
1916	938	938	938	942	942	942	942	942	942	942	942	942
1917	942	942	942	942	942	942	942	942	942	946	950	954
1918	959	963	967	975	975	975	971	971	971	975	979	983
1919	988	988	988	988	992	996	1000	1004	1008	1012	1021	1029
1920	1046	1062	1079	1104	1104	1104	1104	1100	1100	1133	1133	1133
1921	1137	1137	1137	1137	1137	1141	1145	1149	1154	1154	1158	1162
1922	1170	1174	1178	1185	1191	1197	1197	1199	1201	1201	1203	1212
1923	1220	1232	1245	1257	1266	1274						
Food and Rent combined.												
1913	941	950	950	966	956	964	961	953	953	960	961	960
1914	971	987	1007	1004	1000	1001	1000	999	992	990	977	1003
1915	1003	1001	1008	1020	1040	1071	1121	1188	1156	1159	1122	1134
1916	1128	1148	1142	1133	1142	1144	1156	1145	1145	1140	1145	1142
1917	1144	1157	1166	1163	1050	1145	1148	1180	1196	1196	1182	1174
1918	1183	1187	1181	1180	1185	1179	1173	1155	1165	1189	1206	1224
1919	1250	1263	1273	1270	1278	1282	1288	1292	1286	1324	1357	1358
1920	1374	1408	1421	1439	1469	1543	1570	1569	1597	1586	1542	1527
1921	1525	1518	1475	1435	1415	1404	1408	1404	1401	1383	1374	1346
1922	1341	1330	1331	1346	1360	1361	1393	1414	1411	1392	1384	1393
1923	1398	1384	1383	1426	1440	1473						

In regard to food prices, the highest point was reached in September, 1920, viz., 101 per cent. above July, 1914. Subsequently the prices of food

declined in each month until in March, 1922, they were lower than in February, 1919. Then the index number began to move upwards with some fluctuations until August, when it was higher than in any month since September of the previous year. The most pronounced movement took place in July, when such important commodities as milk, butter, and potatoes became much dearer. In the first six months of 1923 food was about 5 per cent. dearer than in the corresponding period of the previous year, and the prices were rising.

Rents declined slowly from November, 1914, until the end of 1915, and they did not regain the pre-war level until July, 1919. Since that month there has been a gradual increase, amounting in March, 1923, to  $24\frac{1}{2}$  per cent.

The index number for food and rent combined rose by 59·7 per cent. between July, 1914, and September, 1920, an increase of 34 per cent. having occurred in the twenty-two months after the signing of the armistice, though the rise during the fifty months of war was less than 20 per cent.

#### *Comparison with other Countries.*

The following statement shows the extent to which the war affected the retail prices of the principal articles of food in other countries. The figures for the oversea countries have been taken from the "London Labour Gazette" and other official sources; those relating to France and to Sweden include fuel and lighting. The particulars for the Australian States relate to the capital cities:—

Country.	Percentage Increases in Retail Food Prices since July, 1914.							
	July, 1916.	July, 1917.	July, 1918.	July, 1919.	July, 1920.	July, 1921.	July, 1922.	June, 1923.
New South Wales ...	34	32	34	53	96	63	56	64
Victoria ...	34	29	33	44	108	68	54	75
Queensland ...	29	31	41	63	99	67	51	60
South Australia ...	24	12	25	38	92	48	43	53
Western Australia ...	20	13	11	42	63	50	37	45
Tasmania ...	25	24	34	40	84	68	50	55
Australia ...	30	26	31	47	94	61	48	62
New Zealand... ..	19	27	39	44	67	64	44	42
South Africa ...	16	28	34	39	97	39	16	17 Apl.
Holland (Amsterdam) ...	...	42	76	110	117	85	44	45 Mar.
United States ...	9	43	64	86	115	45	39	40 Apl.
Canada ...	14	57	75	86	127	48	38	40 May
United Kingdom ...	61	104	110	109	158	120	80	60
Denmark ...	46	66	87	112	153	136	84	80 Jan.
Sweden ...	42	81	168	210	197	132	79	61 May
Norway ...	60	114*	179	189	219	195	133	114 May
Italy (Rome)... ..	11	37	103	106	218	302	359	381 Apl.
France (Paris) ...	32	83	106	161	273	206	197	225 May
Germany ...	...	...	...	...	1167	1391	6,736	461,900 [May

\* June.

The price level of food commodities in New South Wales in recent months has been higher in comparison with July, 1914, than in the other Australian States except Victoria. The index numbers shown above may not be used for exact comparisons between countries owing to differences in the scope of the data, and in methods of compilation, but they indicate that the highest level in most of the countries enumerated was reached in 1920, the exceptions being Germany and Italy.



## COST OF LIVING.

For the purpose of measuring the extent of variations in the cost of living it is usual to distribute the expenditure of a family into five main classes, viz., food and groceries, rent, fuel and light, clothing, and miscellaneous items, and, having ascertained the rise or fall in respect of each class, to weight the variation in each group for the purpose of calculating the increase or decrease in the general cost of living. The weight to be assigned to each group varies in accordance with the amount of income, the expenditure on the primal necessities of food and shelter being proportionately greater when the income is small. As however, the question of the cost of living is studied largely in relation to wages and the standard of living in respect of persons of moderate means, it is customary to consider the ratio of the component groups of expenditure on a basis of the wage of an unskilled worker.

In New South Wales the standard is based on a living wage determination of the Board of Trade as shown in the section relating to Employment. It is interesting to compare the distribution of the expenditure of a worker's family, according to this official standard, with the standards adopted in other countries.

Expenditure Group.	Sydney Living Wage (Board of Trade), Oct., 1919.	Sydney Cost of Living (Basic Wage Commission, Nov., 1920).	United States. Cost of Living Inquiry (National Conference Board), 1919.	Canada, 1918, (based on pre-war Budget).	United Kingdom, 1920, (based on pre-war standard).
	per cent.	per cent.	per cent.	per cent.	per cent.
Food and Groceries	41	40	43	39	60
Rent ...	20	19	18	14	16
Fuel and Light ...	4	4	6	9	8
Clothing ...	18	23	13	19	12
Miscellaneous ...	17	14	20	19	4
Total ...	100	100	100	100	100

An analysis of the expenditure of a worker's family, representing the average obtained from pre-war budgets in several countries, was published in previous issues of this Year Book, the percentages being as follows :—Food and groceries 46, rent 25, fuel and light 5, clothing 13, and miscellaneous 11. In comparison with this standard, the Sydney living wage of 1919 shows much higher proportions of expenditure on clothing and miscellaneous items, viz., 18 and 17 per cent. The percentages in respect of the other groups were much lower, particularly rent. The proportions for food, rent, and fuel in the Sydney cost of living as standardised by the Commonwealth Basic Wage Commission in 1920 are similar to those of the Sydney living wage, but the proportion is higher for clothing and lower for miscellaneous items.

The analysis of expenditure in the United States relates to wage-earners in average American communities, and was determined from the results of government and other investigations for the purpose of a cost of living survey, conducted by the National Industrial Conference Board. It is comparable with the analysis of the Sydney living wage. The expenditure on food and rent represented 61 per cent. of the total in each case, but the proportions were lower in Sydney for fuel and for miscellaneous items, and higher for clothing. The proportions of expenditure in Canada were determined from studies made regarding family expenditure, a budget being planned on the basis of a family living on the average civil service salary

(approximately 1,000 dollars) in 1909. On account of the cold climate a relatively high expenditure on fuel and clothing is necessary in order to maintain a fair standard of comfort.

The proportions of expenditure in the United Kingdom relate to a worker's family; they are based on a pre-war standard, and are used by the Department of Labour in calculating the increase in the cost of living in the United Kingdom. The weight assigned to food was taken from budgets collected in 1904, to rent from data obtained in 1912, and to clothing from pre-war investigation. The analysis bears little resemblance to the other standards. Food expenditure absorbs the high proportion of 60 per cent. of the worker's income, but miscellaneous expenditure represents only 4 per cent.

#### *Cost of Food—Change in Regimen.*

The index numbers on page 428 show the movement in the retail prices of food on the basis of a fixed regimen; it is recognised however that variations in the actual cost of food depend also upon changes in dietary, which is adjusted to meet changes in prices and in supplies, and the combined effect upon the food bill of a family of five persons of changes in prices and in the consumption of the principal food commodities is illustrated in the following table. In calculating the cost the average consumption per member of the family in 1922 is assumed to have been equivalent to the general average per head of population as shown on page 411, and corresponding figures have been used for the year 1914; an exception has been made in regard to flour and sugar, of which the quantities have been reduced to make allowance for the quantities included in bread, jam, etc.

Fruit and vegetables, except potatoes, have been excluded on account of the impossibility of obtaining prices which would be properly comparable, principally owing to seasonal variations and to the difficulty of estimating the consumption.

Article.	Unit of Quantity.	1914.			1922.		
		Weekly Consumption.	Average Price.	Weekly Cost.	Weekly Consumption.	Average Price.	Weekly Cost.
Beef ... ..	lb.	12·8	d. 5·3	s. 7·8	10·8	d. 6·5	s. 10·2
Mutton ... ..	lb.	8·1	4·8	3 2·9	8·3	5·8	4 0·1
Pork ... ..	lb.	·3	10·3	3·1	·4	13·4	5·4
Bacon and Ham ... ..	lb.	·9	11·0	9·9	1·0	17·3	1 5·3
Fish—Fresh, etc. ... ..	lb.	·8	9·5	7·6	1·0	16·5	1 4·5
„ Preserved ... ..	lb.	·4	10·5	4·2	·3	20·5	6·2
Potatoes ... ..	lb.	14·4	·9	1 1·0	11·2	1·5	1 4·8
Flour ... ..	lb.	4·0	1·4	5·6	4·0	2·1	8·4
Bread ... ..	2lb. loaf	10·0	3·5	2 11·0	9·2	4·7	3 7·2
Rice ... ..	lb.	·8	3·0	2·4	·5	3·6	1·8
Sago and Tapioca ... ..	lb.	·2	2·7	·5	·2	3·6	0·7
Oatmeal ... ..	lb.	·5	2·6	1·3	·5	4·0	2·0
Sugar ... ..	lb.	6·0	2·7	1 4·2	6·0	5·8	2 10·8
Jam ... ..	lb.	1·6	5·0	8·0	1·0	10·7	10·7
Butter ... ..	lb.	2·9	14·2	3 5·2	2·6	22·2	4 9·7
Cheese ... ..	lb.	·3	10·6	3·2	·3	13·9	4·2
Milk—Fresh ... ..	qt.	7·7	5·3	3 4·8	7·9	8·8	5 9·5
Tea ... ..	lb.	·7	15·8	11·1	·8	23·2	1 6·6
Coffee ... ..	oz.	1·3	1·1	1·4	1·1	1·5	1·7
Total ... ..	...	...	...	25 11·2	...	...	36 1·8

The weekly expenditure on the commodities enumerated rose from 25s. 11½d. in 1914 to 36s. 1¾d. in 1922—an increase of 39 per cent. The meat bill increased from 9s. 11¾d. to 11s. 9d., while the expenditure on milk and butter rose from 6s. 10d. to 10s. 7d.

Taking rent into consideration—the average being 20s. in 1914 and 24s. in 1922—the total weekly expenditure was 45s. 11½d. as compared with 60s. 1¾d., and the increase per week during the period amounted to 14s. 2½d., which represents 31 per cent.

The price level of food in 1922, computed on the same basis as the index numbers shown in the table on page 428, is found to have been 53 per cent. higher than in 1914, and of food and rent combined 38 per cent. higher; the differences from the increases quoted above, viz., 39 and 31 per cent. respectively, are due to the fact that in computing the price levels the regimen was assumed to be constant. In other words it may be said that the increases in food prices and rent would have increased the average household expenditure on food and rent by 38 per cent. between 1914 and 1922, if that household had purchased the same quantities of the commodities in each year, whereas, owing to decreased quantities being consumed in the later year, the actual increase in expenditure was 31 per cent.

#### *Cost of Clothing.*

The measurement of changes in the cost of clothing presents such great difficulty that this item is frequently omitted from official investigations and it is often assumed that variations in the general cost of living may be determined with a reasonable degree of accuracy by the measurement of the groups, food and shelter. The chief difficulty in regard to the clothing group lies in the determination of standards owing to the vast range of articles of clothing, numerous grades of quality, and rapid changes in fashion and design. The group is, however, of such importance that in 1921 arrangements were made with a number of large retail firms in Sydney to supply particulars showing the movement of the prices of clothing since the beginning of the war period.

The lists sent to the firms included forty-two of the principal articles of clothing for a man, woman, school boy, school girl, and a young child (not an infant in arms); also fourteen items of piece goods, sewing cotton and knitting wool. It was not considered practicable to attempt to collect data concerning articles of the same quality nor even of the same material, and the firms were asked to quote the price as in January and in July of each year of each item of the quality usually purchased by persons of moderate means.

In order to form a price-index to indicate the general trend of the cost of clothing, budgets were prepared from the quotations of each firm to represent the annual replacements for a man, a woman, and for each child, the replacements of the various articles being approximately the same as those in the indicator list used by the Australian Basic Wage Commission in 1920. An average was taken of the January and July budgets for each unit of the family to obtain an average for each year; the averages were added to obtain an annual expenditure for a family; and the aggregates were used as the basis of the following index numbers, which were rounded-off and related to 1914=100.

Year.	Index Number.	Year.	Index Number.
1914... ..	100	1919... ..	190
1915... ..	110	1920... ..	215
1916... ..	120	1921... ..	200
1917... ..	140	1922... ..	175
1918... ..	160		

The index numbers show that the cost of clothing rose by about 10 per cent. during 1915 and 1916, and the rate of increase was more rapid in the following years until 1920, when the index number was 115 per cent. higher than in 1914; in 1921 there was a decline which brought the prices back to a level just double the prices in 1914; in the succeeding year there was a further reduction of 12 per cent.

The method of taking as a basis of a price index the predominant price paid at various dates by a certain section of the people viz., those with moderate incomes, does not preserve an identity of standard but involves to some extent changes in quality. In normal times the standard of clothing used by any section of the community, *e.g.* unskilled workers, changes very slowly and would not vary appreciably within a decade. The period under review however was characterised by violent changes, social and economic, which were reflected in every phase of national life. In the earlier years of the war prices of food rose much more rapidly than wages, thus necessitating economy, which would naturally be reflected in the matter of clothing more readily than in the food group. Subsequently an expansion of the currency, heavy Government expenditure and an improvement in the return from primary production, created an atmosphere of artificial prosperity, and as wages increased it is reasonable to suppose that a higher standard of clothing became general amongst the majority of the population. In 1920 it became apparent that prices had reached a maximum, and consumers began to restrict their purchases in expectation of a decline.

The position in regard to clothing was affected in 1921 by excessive importations, but merchants, faced with the difficulty of selling a large supply of goods on a falling market, endeavoured to avoid drastic reductions in respect of goods which they had purchased when prices were abnormally high.

#### *Cost of Fuel and Miscellaneous Expenses.*

The cost of fuel and light forms the smallest of the groups of family expenditure, but substantial increases which have occurred since 1914 have had an appreciable effect upon the cost of living. Kerosene and gas were cheaper in 1922 than in the previous year but coal and firewood were dearer. Kerosene is included in the list of food and groceries, and the average retail prices are shown on page 423. Gas for household use in Sydney was raised by various increases from 3s. 6d. per 1,000 cubic feet in July, 1914, to 5s. 9d. in November, 1920; in 1922 the price was reduced to 5s. 8d. on 1st May and to 5s. 6d. on 4th August; on 1st January, 1923, a further reduction of 2d. per 1,000 cubic feet was made. Coal was nearly 80 per cent. dearer in 1922 than in 1914, having risen from 24s. 6d. per ton to 43s. 7d. Firewood was increased from 28s. per ton in July, 1914, to 45s. in 1922.

Almost all the items of miscellaneous expenditure have become dearer; for instance, fares by train, tram, and ferry, which are an important factor. General increases amounting to about 66 per cent. were made in railway fares between July, 1914, and November, 1920, when the last important alteration was made. Tram fares up to 31st March, 1914, were charged at the rate of 1d. per section, then the fare for the second section was raised to 1½d., the fare for two or more remaining unchanged. Since 6th November, 1920, tram fares have been charged at the following rates:—One section 2d., two sections 3d., three sections 4d., four sections 5d., five and six sections 6d. Increases have been made also in the fares charged on the majority of Sydney Harbour ferry routes. For instance, the monthly season ticket rates from

Circular Quay to Milson's Point, were raised by successive increases from 4s. 9d. for men in July, 1914, to 8s. in August, 1921, when they reached the highest rate; the corresponding charges for women's tickets being 3s. 6d. and 6s. 9d.; in 1922 a reduction of 1s. 3d. was made in respect of both rates. The prices of the daily newspapers which had been raised during 1919 and 1920 reverted to the former charge of 1d. per copy at the beginning of July, 1922.

For postage, additional charges were imposed on letters, etc., in October, 1918, and further increases were made in October, 1920, when letter rates were raised by  $\frac{1}{2}$ d. per  $\frac{1}{2}$ oz., and fees for telephonic calls, except in small country exchanges, were increased by 25 per cent., and increases ranging up to 50 per cent. were made in the charges for telegrams. Contributions to friendly societies amounted on an average to about 1s. 3d. per week in 1914 and to 1s. 7 $\frac{1}{2}$ d. in 1922. Subscriptions to trade unions, which range from 6d. to 1s. per week, have remained constant.

The retail price of tobacco has increased by over 70 per cent. since 1914. The average price of plug tobacco of popular brand was 10s. 6d. per lb. in 1922, as compared with 6s. in 1914.

Index numbers to represent the variations in the cost of fuel and light used by a family of moderate means are shown below. They have been calculated by weighting the average prices of coal, firewood, and gas, in accordance with the quantity consumed annually. The index numbers of miscellaneous items are approximate only, being based on the items enumerated above. Prices in 1914 were taken as a base and called 100.

Year.	Cost of Fuel.	Cost of Miscellaneous Expenses.	Year.	Cost of Fuel.	Cost of Miscellaneous Expenses.
1914	100	100	1919	130	115
1915	102	102	1920	140	140
1916	105	102	1921	160	145
1917	115	105	1922	165	140
1918	120	110			

Increases in the cost of fuel and light up to 1921 were somewhat lower than the increases in food prices, and the index numbers continued to rise in the following year. Miscellaneous items apparently increased slowly until 1920, when they were about 40 per cent. above 1914 prices, and a further rise occurred in the following year; then the index number dropped back to the 1920 level.

#### *Changes in the Cost of Living.*

A fair indication of the changes in the total cost of living may be obtained by summarising the index numbers of the cost of the various items discussed above, assigning to each group a weight in accordance with the ratio its cost bears to the total family expenditure.

The weights applied in the following table are as follow:—Food and groceries 41, rent 20, clothing 20, fuel and light 4, miscellaneous items 15; they represent an approximate mean of the ratios in the official standards of the Sydney living wage fixed by the Board of Trade in 1919 and the Sydney cost of living wage as determined by the Basic Wage Commission in 1920. It is not claimed that the results are an exact

measure of the changes, and they are put forth only as a rough indication of the movement in the general cost of living since 1914.

Year.	Food and Groceries.	Rent.	Clothing.	Fuel.	Miscellaneous Items.	General Increase in Cost of Living since 1914.
1914	100	100	100	100	100	...
1915	121	95	110	102	102	about 10 per cent.
1916	132	95	120	105	102	" 15 "
1917	136	95	140	115	105	" 25 "
1918	137	97	160	120	110	" 30 "
1919	155	100	190	130	115	" 45 "
1920	186	110	215	140	140	" 70 "
1921	167	115	200	160	145	" 60 "
1922	153	120	175	165	140	" 50 "

In the years 1915 and 1916 food prices increased more rapidly than the cost of any other group, while rents declined; between 1916 and 1918 there was little change in the index number of food prices, but clothing prices advanced rapidly. Both these groups reached a maximum in 1920, when clothing prices were more than double the pre-war prices, and food was 86 per cent. higher. In the other groups the variation was not so marked, the rise being continuous throughout the period but slower. On the whole the cost of living, which rose by about 30 per cent. during the war period, increased to a greater extent during the two years 1919 and 1920, after the armistice was declared. In each of the following years there was a drop of about 5 per cent.

A comparison of the results obtained by measuring the movement in the cost of living since 1914 on the basis of the cost of (1) food and rent only, and (2) all items of family expenditure shows that in 1915 and 1916 both methods gave practically the same result, but in later years the increase in the cost of all items was much greater than the increase in respect of food and rent only. Thus in 1917 and in 1918 the first method showed increases over the cost in 1914 of 15 per cent. and 20 per cent. approximately in the respective years, and the second method 25 per cent. and 30 per cent. Then the difference widened and in 1920 and 1921 food and rent combined showed increases of about 50 per cent. and 40 per cent. respectively, while all items in 1920 were apparently about 70 per cent. dearer than in 1914 and in the following year 60 per cent. dearer. In 1922 the cost of food and rent was nearly 40 per cent. higher, and the cost of all items 50 per cent. higher than in 1914.

## EMPLOYMENT AND PRODUCTION

### EMPLOYMENT.

INFORMATION regarding the occupations of the people is obtained only at the Census, and statistics relating to the periods between the Census dates are restricted mainly to certain classes of employment in the primary industries and in manufacturing establishments.

The preliminary results of the last Census indicate that in April, 1921, the breadwinners numbered 884,104, of whom 713,169, or 81 per cent. were males. A summary of the statistics relating to occupations, as at each Census since 1901, is shown below :—

Occupations.	1901.			1911.			1921.		
	Males.	Females	Total.	Males.	Females	Total.	Males.	Females.	Total.
Professional .. ..	26,855	14,529	41,384	36,763	19,377	56,140	48,543	29,233	77,776
Domestic .. ..	20,128	52,690	72,818	18,898	54,483	73,381	20,786	60,904	81,690
Commercial ... ..	67,097	10,587	77,684	88,208	18,112	106,320	107,474	31,270	138,744
Transport and Com- munication .. ..	42,822	1,045	43,867	60,367	1,597	61,964	81,826	2,693	84,519
Industrial .. ..	122,092	23,996	146,088	171,921	36,093	208,014	243,862	40,803	284,668
Primary Producers—									
Agricultural .. ..	75,884	1,735	77,619	77,599	1,636	79,235	93,598	910	94,508
Pastoral & Dairying	47,162	2,880	50,042	69,724	3,266	72,990	63,525	2,044	65,569
Mining .. ..	38,378	4	38,382	59,551	23	59,574	32,841	76	32,917
Other .. ..	6,788	23	6,811	12,269	25	12,294	15,593	123	15,716
Total Primary ..	168,212	4,642	172,854	199,143	4,950	204,093	205,557	3,153	208,710
Independent .. ..	3,597	5,927	9,524	5,507	3,401	8,908	5,121	2,876	7,997
Total Breadwinners	451,403	113,396	564,799	580,807	138,013	718,820	713,169	170,935	884,104
Dependents .. ..	256,634	581,164	787,798	265,731	650,480	916,211	349,789	856,463	1,206,252
Not stated .. ..	1,968	281	2,249	11,160	543	11,703	8,543	1,472	10,015
Total .. ..	710,005	644,841	1,354,846	857,698	789,036	1,646,734	1,071,501	1,028,870	2,100,371

The majority of the people are classified as dependents, the numerical importance of the group being due to the fact that it includes, as well as children, women engaged in domestic duties for which wages are not paid.

In regard to the male breadwinners, the most striking feature of the comparison is the increase in the number engaged in industrial occupations, who were more numerous in 1921 than any other group, numbering 243,862, or 38,305 more than the primary producers, who had constituted the largest class in 1901 and 1911. Of the primary producers, the numbers engaged in pastoral and dairying pursuits and in mining were actually lower in 1921 than at the previous census.

Amongst the females there has been a marked increase in the numbers engaged in commercial and professional occupations. The largest groups are the domestic and industrial, but neither of these classes has maintained its importance in relation to the total female population.

The proportion of the population engaged in each class of occupation, as at the last three census dates, is shown below :—

Occupations.	1901.			1911.			1921.		
	Males.	Females	Total.	Males.	Females	Total.	Males.	Females	Total.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Professional .. .. .	3·79	2·26	3·06	4·34	2·46	3·44	4·57	2·85	3·72
Domestic .. .. .	2·84	8·17	5·39	2·23	6·91	4·49	1·95	5·93	3·91
Commercial .. .. .	9·47	1·64	5·74	10·42	2·30	6·50	10·11	3·04	6·64
Transport and Communi- cation .. .. .	6·05	·16	3·24	7·13	·20	3·79	7·70	·26	4·04
Industrial .. .. .	17·33	3·72	10·85	20·31	4·58	12·72	22·94	3·97	13·62
Primary Producers—									
Agricultural .. .. .	10·72	·27	5·74	6·17	·21	4·85	8·80	·00	4·52
Pastoral and Dairying ..	6·66	·45	3·70	8·24	·41	4·13	5·98	·20	3·14
Mining .. .. .	5·42	..	2·84	4·67	..	2·42	3·09	·01	1·57
Other .. .. .	·96	..	·50	1·45	..	·75	1·47	·01	·75
Total Primary .. .. .	23·76	·72	12·78	28·53	·62	12·48	19·34	·31	9·98
Independent .. .. .	·51	·92	·70	·65	·43	·54	·48	·28	·33
Total Breadwinners..	63·75	17·59	41·76	68·61	17·50	43·96	67·09	16·64	42·29
Dependents .. .. .	36·25	82·41	58·24	31·39	82·50	56·04	32·91	83·36	57·71
Total .. .. .	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00

The decrease in the proportion of breadwinners amongst the male population is due probably to war losses, the proportion of males over 15 years of age being somewhat lower in 1921 than at the previous census. The decline is noticeable in all the main branches of primary industry and in the domestic group, and the proportion in the commercial class showed a slight downward tendency. The proportion of breadwinners amongst the females also has declined, but the reason is not readily apparent from the preliminary figures available at the present time. Increased employment of women in professional and commercial pursuits, in which 5·9 per cent. of the female population was engaged in 1921, has not compensated for the decline from 8·2 per cent. to 5·9 in the domestic group; in the industrial group the proportion in 1921 was slightly higher than in 1901, but it has decreased since 1911. The number of women returned as breadwinners in the primary industries is small, and has declined.

A comparative statement indicating the grade of employment of the people engaged in the various classes of occupation, as at each census since



1901 is shown below. The dependents and others not classifiable under the other categories are included under the heading, grade not applicable :—

Grade.	1901.			1911.			1921.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Employers .. ..	48,920	4,933	53,853	68,582	5,672	74,254	44,706	3,225	47,931
Working on own account .. ..	65,577	16,789	82,357	49,676	12,827	62,503	104,485	17,378	121,863
Unremunerated assistants .. ..	17,635	6,077	23,712	20,387	4,869	25,256	9,712	1,608	11,320
Salary and wage earners .. ..	290,263	72,190	362,393	393,616	101,815	495,431	456,068	130,619	586,687
Unemployed .. ..	21,110	3,639	24,749	16,210	2,760	18,970	54,092	7,651	61,743
Grade not applicable .. ..	264,910	540,911	805,821	298,038	600,030	898,068	301,525	865,423	1,256,959
Grade not stated .. ..	1,650	315	1,965	11,189	1,123	12,312	10,916	2,061	12,977
Total .. ..	710,005	644,841	1,354,846	857,098	789,036	1,646,734	1,071,501	1,028,870	2,100,371

A remarkable decrease in the number of employers occurred during the last intercensal period. In 1901 the number was 53,853, and in 1911 there were 74,254, the proportion to the total breadwinners being 10 per cent. at each census. But in 1921 the number dropped to 47,931 and the ratio to 5 per cent. On the other hand, the number of persons working on their own account without employing paid labour decreased between 1901 and 1911, and in the following decade the number was nearly doubled, with the result that the proportion of the total breadwinners, which dropped from 15 per cent. to 9 per cent. during the decennium 1901–11, had returned to the former level in 1921.

Apparently there is a tendency towards the centralisation of paid labour in larger establishments, as the decrease in the number of employers has been accompanied by an increase in the number of salary and wage earners.

Including the unemployed, of whom the majority belong to the latter grade, the number of persons giving their labour in return for salary or wages represented 68 per cent. of the breadwinners in 1901, 72 per cent. in 1911, and 73 per cent. in 1921. The figures in the table indicate a ratio of 1 employer to 7 employees in 1901 and 1911, and 1 to 13 in 1921, but the ratio is not strictly accurate, as the employees include those engaged in public services, in the employment of corporations, etc., and in domestic service, for whom corresponding units are not included under the category of employers.

Returns regarding the number of persons employed in the principal rural industries of the State are collected annually, but the information is not comparable with the census figures, because it relates only to persons engaged regularly on rural holdings. It includes occupiers or managers and members of their families who work constantly on a holding, but temporary hands and contract workers engaged for harvesting, shearing, etc., are omitted. Moreover, the census figures relate to a specific date, and the distribution of the workers amongst the several branches of rural industry differs materially from the annual records which show the average number employed, whose distribution is determined usually in accordance with the main purposes for which each holding was used during the year.

In regard to the number of females employed in rural industries, considerable difficulty is experienced in obtaining satisfactory statistics, owing to the fact that a large number of women and girls, especially on dairy farms, are

employed only partly in rural production in conjunction with their domestic duties. Usually they do not receive wages, and at a census they are classified as dependents; in the annual returns there is a tendency to include them as rural workers, consequently a wide discrepancy arises between the census and the annual records, the latter being overstated. Since 1919 greater care has been exercised in the collection of the annual returns in regard to women engaged in rural pursuits, and the collectors have been instructed to exclude women engaged primarily in domestic duties.

The following statement shows the number of persons engaged in the various branches of rural industry during each year since 1911. In regard to female employees, it is estimated that the returns for the years prior to 1919-20 included 12,000 women wholly employed in domestic duties, and the figures for those years have been amended, so that the numbers quoted in the table represent the numbers as returned, less 12,000 :—

Year.	Agriculture, Poultry, Pig, and Bee-farming.		Dairying.		Pastoral.		Total Rural Industries.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
1911	58,299	1,141	27,488	11,293	43,387	770	129,174	13,204	142,378
1912	58,984	1,055	26,537	10,443	41,893	720	127,414	12,218	139,632
1913	61,525	1,160	25,961	11,478	40,543	790	128,029	13,428	141,457
1914-15	59,944	1,019	23,435	10,073	39,131	700	122,510	11,792	134,302
1915-16	59,256	1,049	21,979	10,378	38,042	720	119,277	12,147	131,424
1916-17	55,122	1,216	22,363	12,041	38,607	820	116,092	14,077	130,169
1917-18	50,490	1,287	21,071	12,749	40,988	868	112,549	14,904	127,453
1918-19	45,523	1,173	24,561	11,625	43,824	790	113,913	13,588	127,501
1919-20	48,942	1,161	24,685	12,678	53,282	867	126,909	14,706	141,615
1920-21	50,162	1,509	26,648	13,176	43,766	1,022	120,576	15,707	136,283
1921-22	48,571	1,411	29,660	14,571	42,674	860	120,905	16,842	137,747

The number of workers in the rural industries, being affected by seasonal conditions, is subject to great fluctuation. The number engaged in cultivating, etc., has declined since 1911, though the area under cultivation has extended considerably, the greater use of machinery having lessened the need for workers in agriculture; it is probable also that the decrease in the labour engaged permanently has been offset, to some extent, by the employment of contract workers. The number of dairy workers decreased between 1911 and 1918, and has since increased considerably. In the pastoral industry the number does not usually vary greatly from year to year except in seasons such as 1919-20 when additional labour is required to tend the flocks and herds under severe drought conditions. On the whole the number of men engaged permanently in rural pursuits in 1921-22 was 2·4 per cent. less than the average of the three years prior to the war, and apparently the number of women has increased, the majority being engaged in dairying.

The rural workers in 1921-22 included 68,743 working proprietors, viz., 66,823 men and 1,920 women; 16,930 men and 13,037 women were classed as relatives employed constantly, but not receiving wages; and 37,152 men and 1,885 women, including managers and relatives, were receiving wages.

Annual returns relating to employment are collected also in respect of mining and other primary industries and the manufacturing industries, and the figures for each year since 1911 are summarised in the following statement; the particulars for the last eight years relate to the twelve months ended 30th June, except those showing the employment in mines, which are for the calendar years ended six months later. In regard to the manu-

facturing industries, employees in any establishment, with fewer than four persons, have not been included unless machinery was used in the factory:—

Year.	Rural Industries.	Forests, Fisheries, and Trapping.	Mining.	Manufacturing.			Total.		
	Total.	Males.	Males.	Males.	Females.	Total.	Males.	Females.	Total.
1911	142,378	6,000	33,367	82,083	26,541	108,624	250,624	39,745	290,369
1912	139,632	6,100	33,778	88,178	27,383	115,561	255,470	39,601	295,071
1913	141,457	6,200	34,510	93,036	27,364	120,400	261,775	40,792	302,567
1914-15	134,302	6,200	27,701	90,409	26,202	116,611	246,820	37,994	284,814
1915-16	131,424	6,300	27,994	87,724	28,677	116,401	241,295	40,824	282,119
1916-17	130,169	6,500	28,777	88,910	29,087	117,997	240,279	43,164	283,443
1917-18	127,453	6,800	29,913	90,025	30,529	120,554	239,287	45,433	284,720
1918-19	127,501	7,000	29,069	96,884	30,707	127,591	246,866	44,295	291,161
1919-20	141,615	6,800	27,273	109,836	34,618	144,454	270,818	49,324	320,142
1920-21	136,283	6,700	26,432	112,187	32,824	145,011	265,895	48,531	314,426
1921-22	137,747	6,900	26,269	112,362	36,514	148,876	266,436	53,356	319,792

The figures relating to the mining industry have been amended since last issue by the exclusion therefrom of a number of employees engaged in treating minerals at the place of production, and already included in the returns of the manufacturing industries, viz., those engaged in the manufacture of coke at coke works, in the manufacture of lime, cement, etc., at limestone quarries, and in the treatment of ores at mines. There was a steady decline in the number of metalliferous miners from 16,120 in 1911 to 10,120 in 1915. Then the number rose with an increased demand for industrial metals until 1919, when an extensive industrial dislocation in the Broken Hill district caused employment to diminish; in later years the condition of the metal market was unsatisfactory, and the number employed in 1922 was only 4,565. In the coal and shale mines employment increased from 17,247 in 1911 to 18,534 in 1914, and a decline of about 2,000 occurred during the war period, when the export trade was restricted, but the number rose in each of last four years—21,704 men being employed in 1922.

In the manufacturing industry a steady increase was interrupted by the outbreak of war and the consequent diminution in the supply of male labour. In 1918-19 the number of male employees rose above the pre-war level and continued to increase until the maximum was reached in 1921-22, though the increase over the figures of the previous year was only small owing to depression in the iron trades. The number of females employed in manufacturing establishments increased in each year between 1914-15 and 1919-20, then slackness in the tailoring and dressmaking establishments caused a reduction, but in the last year of the period under review the number was the highest on record. The majority of female factory workers are engaged in the clothing trades, and fluctuations in the number of employees reflect generally the conditions of those industries.

#### *Government Employees.*

In New South Wales there is a large number of persons employed by the State and Commonwealth Governments. In addition to services such as education, police, justice, health, lands, works, etc., the State owns railways, tramways, and wharves, and engages in various industrial enterprises, e.g., timber yards and sawmill, meat supply, dockyards, quarries, brick and pipe works; thus a large number of persons are in constant employment. The Commonwealth services include posts, telegraphs and telephones, customs, taxation, and defence.

The number of employees in New South Wales under the Crown as at 30th June, 1922, is shown below. The figures do not include persons employed in the Government Savings Bank of New South nor in the Commonwealth Bank of Australia:—

Services.	Permanent.		Temporary.		Total.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
<b>State—</b>							
Public Service Board ...	10,039	5,816	2,578	1,233	12,617	7,049	19,666
Railways and Tramways ...	33,432	780	16,586	645	50,018	1,425	51,443
Sydney Harbour Trust ...	206	20	1,085	9	1,291	29	1,320
Water Supply and Sewerage —Metropolitan and Hunter District ...	1,668	45	1,401	4	3,069	49	3,118
Water Conservation and Irrigation Commission ...	285	22	1,303	46	1,588	68	1,656
Metropolitan Meat Industry Board ...	...	...	568	20	568	20	588
Police ...	2,749	8	...	2	2,749	10	2,759
Other ...	514	40	6,851	118	7,365	158	7,523
Total ...	48,893	6,731	30,372	2,077	79,265	8,808	88,073
<b>Commonwealth—</b>							
Public Service Commissioner	8,091	1,089	1,884	552	9,885	1,641	11,526
Department of the Navy ...	136	...	865	9	1,001	9	1,010
Defence Department ...	600	...	...	...	600	...	600
Repatriation Department ...	207	52	280	122	487	174	661
Total ...	8,944	1,141	3,009	683	11,973	1,824	13,797
Grand total ...	57,837	7,872	33,401	2,760	91,238	10,632	101,870

The figures in the table include the general labourers and navvies employed by the various public bodies; the wages staffs in the State services numbered 60,631 persons, viz., 45,308 employed in connection with the railways and tramways, of whom 6,980 were employed in the construction and duplication of lines; 9,871 on water conservation, sewerage, and harbour works, etc.; and 5,452 in other services. Of the Commonwealth employees there were 3,989 employed on the wages staffs.

#### UNEMPLOYMENT.

Particulars relating to unemployment are collected at the census, persons being returned as unemployed who had been out of work for more than a week at the date of collection. The number of unemployed at each census since 1911 is shown in the table on page 439, the number in April, 1921, being 61,743 persons, or 9·5 per cent., of the group embracing salary and wage earners and the unemployed combined. The males numbered 54,092, or 10·6 per cent., and the females 7,651, or 5·5 per cent. At the previous census, in March, 1911, less than 4 per cent. of the male salary and wage earners, and 2·6 per cent. of the females were out of work. The proportions indicate that entirely different industrial conditions prevailed in those years, the census of 1911 being taken during a period of high productive activity, whereas in April, 1921, unemployment resulting from post-war disorganisation was probably at a maximum.

At the census of 1921, persons were asked to state the cause of their unemployment. The information was not supplied in respect of 3,131 persons; of the remainder, 29,304 cases, or 50 per cent., were due to scarcity of employment; 14,573, or 25 per cent., to illness; 2,119, or 3·6 per cent., to industrial disputes; 1,852, or 3 per cent., to accident; and 863, or 1·5 per cent., to old age. The majority of males, viz. 53 per cent., were out of work on account of scarcity of employment, but illness was the principal cause of unemployment amongst women, 48 per cent. being idle for that reason. The

duration of unemployment was stated in regard to 51,185 persons, those unemployed for less than 5 weeks numbered 24,299, or 48 per cent.; from 5 to 10 weeks, 9,395, or 18 per cent.; from 10 to 15 weeks, 5,237, or 10 per cent.; over 15 weeks, 12,254, or 24 per cent.

In regard to intercensal periods, the available data are not sufficient to give a fair indication of the extent of unemployment. Periodical returns relating to the condition of employment amongst various classes of workers are supplied to the Department of Labour and Industry by secretaries of trade unions, but many unions do not furnish the returns regularly, and a large number, including unions of workers following unskilled occupations in which unemployment is most likely to occur, do not supply any information owing to lack of records.

#### *Intermittency of Employment.*

Apart from unemployment arising from an over supply of labour, which is apparently a permanent condition in regard to unskilled occupations, there are many industries in which a considerable loss of working time occurs even in normal periods on account of intermittency arising from fluctuations in trade and in the volume of production, or from the seasonal nature of the work and other causes. In the manufacturing industry, in which nearly 148,900 persons are employed, returns show that the average time worked in all classes of factories is approximately 11½ months per annum; the average has remained fairly constant over a period of years, but as the figure is based on data concerning each establishment, it affords little indication regarding the intermittency suffered by individual employees who may be engaged in more than one factory, or in more than one industry during a year.

In the building trades intermittency is a recognised feature, though a large proportion of the employees are skilled, and the reserves of workers cannot, under normally favourable conditions, be great. On the other hand a system of organisation has not been devised to ensure continuity of employment and at the same time a sufficient supply of labour to obviate delay in the fulfilment of contracts.

Coal-mining is an industry in which intermittency is a constant factor, and for a number of years the Department of Labour and Industry has endeavoured to collect information relating to interruptions to work in the principal mines. From these records the following particulars have been obtained to show the number of work-days on which the collieries have been idle during each year since 1915; mines closed throughout a whole year are not included:—

Particulars.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	Annual Average 1915 to 1922.
No. of collieries supplying information	78	77	83	68	68	80	90	88	79
Possible working days	276	278	276	272	278	274	270	271	274
Days worked ...	197	188	210	213	214	229	227	213	211
Working days lost—									
Through disputes	20	40	47	6	12	15	15	17	22
Other causes ...	59	50	19	53	52	30	28	41	41
Total ...	79	90	66	59	64	45	43	58	63
Working days lost, per cent. of possible—									
Through disputes	7.2	14.4	17.0	2.2	4.4	5.5	5.5	6.3	7.9
Other causes ...	21.4	18.0	6.9	19.5	19.2	10.9	10.4	15.1	15.1
Total ...	28.6	32.4	23.9	21.7	23.6	16.4	15.9	21.4	23.0

During the period of eight years the average number of work-days was 274 per annum, after making allowances for Sundays, pay Saturdays, and regular public holidays. The days on which operations were suspended numbered, on an average, 63 per annum, or 23 per cent. of the total work-days; 22 days, or 7·9 per cent., were lost through industrial disputes, and 41, or 15·1 per cent. through other causes. Slackness of trade, owing to restrictions imposed on the export of coal, was the cause of considerable loss during the war period.

The total loss of working time involved by the interruptions to work in the coal-mines during the last five years is shown below; the figures have been obtained by multiplying the number of days on which the collieries were idle by the number of employees affected, and by classifying the working-days lost according to the causes of the dislocations:—

Causes.	Days Lost.						1918-1922.	
	1918.	1919.	1920.	1921.	1922.		Average per Annum.	Per cent. of Total.
Industrial disputes..	92,692	238,644	307,349	355,922	468,358		292,593	26·7
Truck shortage ...	49,229	63,573	102,962	47,775	13,753		55,458	5·0
Slackness of trade and shortage of shipping ...	660,681	827,155	345,407	354,713	616,328		560,857	51·1
Mine disabilities, etc.	12,975	32,772	36,851	110,296	120,348		62,648	5·7
Deaths of employees	3,213	5,916	8,659	22,171	12,757		10,543	1·0
Meetings, extra holidays ...	40,462	8,406	12,834	25,006	16,000		20,542	1·9
Other causes ...	456	1,950	8,104	3,052	1,200		2,952	·3
Not stated ...	184,946	94,756	38,237	60,052	75,881		90,775	8·3
Total ...	1,044,654	1,273,172	860,403	978,987	1,324,625		1,096,368	100

The average number of days lost on account of dislocations in this industry during the period of five years amounted to 1,096,368 days per annum. Lack of trade or of shipping was responsible for 51 per cent. of the loss, and industrial disputes for nearly 27 per cent. Apparently trade was slack during the first two years of the period, but in 1920 it showed a marked improvement, which was maintained throughout 1921; a decline occurred in the following year.

The loss through industrial disputes has shown an upward tendency throughout the period; further details relating to the disputes are shown on a later page.

The number of employees in the coal-mining industry, as shown on an earlier page, is about 21,700, but as coal-mining is a fundamental industry, variations in the volume of production have a far-reaching effect on other industries and commercial enterprises.

#### *Relief of Unemployment.*

Measures for the relief of unemployment are undertaken by the State Department of Labour and Industry, and are directed mainly towards the organisation of the supply of labour, by means of labour exchanges, and the assistance of destitute persons in need of sustenance while seeking employment.

A few of the trade unions provide for the payment of out-of-work benefits to their members, but otherwise there is little insurance against unemployment. The State has not instituted any fund for the purpose, and there have not been any operations under a section of the Industrial Arbitration Act which authorises the Government to subsidise from public revenue unemployment insurance funds created by contributions of employers and employees.

*State Labour Exchanges.*

The State labour exchanges, which are situated in the main industrial centres, Sydney, Newcastle, and Broken Hill, are administered in conjunction with the office dealing with assisted immigration. The central exchange, with separate departments for men and for women, is in Sydney, and there is a branch in the vicinity of the principal wharves, and another at Balmain. Sub-agencies have been opened in eleven suburban centres, and in 141 country towns. The expenses of the exchanges are borne by the State, fees are not charged, and advances by way of loan may be made to enable persons to avail themselves of employment offered.

The functions of the State labour exchanges are to bring together intending employers and persons seeking employment, to encourage industrial training in skilled trades, to provide suitable training for vagrant and other persons unsuited for ordinary employment, and to co-operate for these purposes with private employment agencies.

In cases where the Department knows of the existence of an industrial dispute, applicants for positions offered by employers concerned in the dispute are notified that the dispute has occurred, and they are not prejudiced at the exchanges by reason of accepting or rejecting the work offered. Fares are not advanced to enable workmen to take vacancies due to a dispute, nor to assist strikers to obtain work outside the districts in which they ordinarily reside.

The State exchanges are concerned specially in securing employment for men who were engaged in active war service. The Returned Soldiers and Sailors Employment Act provides for preference to returned men; employers desiring to obtain employees are required to apply to a State labour exchange or to a committee dealing with the repatriation of soldiers and sailors.

The operations of the State labour exchanges during the last eight years are shown below :—

Year ended 30th June.	Applications for Employment.	Positions made available by Employers.	Persons sent to Work.
1915	24,838	11,842	10,228
1916	18,996	19,017	13,668
1917	19,572	16,771	11,428
1918	23,140	16,261	11,679
1919	22,151	28,937	19,821
1920	42,634	34,016	27,198
1921	45,888	42,081	36,177
1922	46,254	36,724	32,314

During the year ended June, 1922, applications for employment were made by 40,806 men and 5,448 women; positions were made available by employers for 25,789 men and 10,935 women, and 24,763 men and 7,551 women were placed in employment through the agency of the State labour exchanges.

*State Labour Depot.*

For the relief of unemployed persons seeking temporary shelter and assistance a State Labour Depot is maintained at Randwick in proximity to the city; a pig, vegetable, and flower farm, and a dairy have been established, and destitute men unable to maintain themselves are given lodging, food, and a small money allowance in exchange for labour. Competent tradesmen, if employed at their trade, are paid extra. The period of residence must not exceed three months, nor recommence without a similar interval. A certain amount of training is given, and whenever possible trainees are sent to employment.

*Private Employment Agencies.*

Private employment agencies are subject to supervision by the State authorities in terms of the Industrial Arbitration (Amendment) Act, 1918. Such agencies may be conducted by licensed persons only, and they are required to keep registers of persons applying for labour or employment, and of engagements made. The scale of fees chargeable is fixed by regulation, and if an applicant does not obtain labour or employment within fourteen days, the fee must be repaid, less out-of-pocket expenses. Licensees are prohibited from sharing fees with employers, and from keeping as lodgers persons seeking employment.

At 31st March, 1923, there were 61 private agencies on the register, viz., 32 in Sydney, 12 in the suburbs, and 17 in country districts.

## TRADE UNIONS.

Until 1881 trade unions in New South Wales were subject to Imperial legislation, by which the right to combine was recognised, but actions done in restraint of trade were penalised, and the unions lacked the power to safeguard their funds. The first legislation passed in New South Wales, (the Trade Union Act of 1881) is still in operation, though it was amended in 1918 by the Industrial Arbitration Act.

A trade union is defined as "any combination, whether temporary or permanent, for regulating the relations between workmen and employers, or between workmen and workmen, or between employers and employers, or for imposing restrictive conditions on the conduct of any trade or business, whether such combination would or would not, if this Act had not been passed, have been deemed to have been an unlawful combination by reason of some one or more of its purposes being in restraint of trade." Provision is made for the registration of trade unions, the appointment of trustees, in whom the union property is vested and for the constitution of rules. The use of union funds for political purposes is subject to the provisions of the Industrial Arbitration Amendment Act of 1918, and such payments must be made from a separate fund, to which contribution by members is optional. It is stipulated that persons qualified by occupation or employment may not be excluded from membership except on the ground of general bad character.

There are two classes of trade unions, viz., unions of employers and unions of employees; the latter constitute the bulk of the registered organisations, and a brief account of their development was published in the 1921 issue of the Year Book at page 553.

The introduction of a system of industrial arbitration in 1901 led to an increase in the organisation of new trade unions, as registration of employees' unions to bring them within the scope of the system is granted only to



organisations registered under the Trade Union Act of 1881. Upon registration under the Industrial Arbitration law a union becomes a corporate body with perpetual succession and power to acquire and deal with real and personal property, and it acquires statutory powers not accorded by the Trade Union Act of 1881, such as the right to institute proceedings for an award governing the conditions of employment in the industry concerned.

It should be clearly understood that an industrial union of employees is the same organisation as the trade union bearing the same title, the term industrial union indicating merely that it has undergone dual registration for the purposes of the administration of the Industrial Arbitration Act. But the trade or industrial unions are distinct from the political organisations known as labour leagues, which have been established mainly through the action of unionists, for the purpose of securing parliamentary representation.

Since 1912 the scope of the State industrial system has been widened, with the result that unionism, restricted formerly to manual workers, has developed amongst other groups of employees, who have organised for the purposes of arbitration and collective bargaining, *e.g.*, school teachers, professional and clerical employees in the public services, bank officials, journalists, theatrical employees, and musicians.

After the introduction of the Commonwealth system of industrial arbitration in 1904 some of the unions previously on the State registry became merged into Federal associations, but unless a union elects to be regulated exclusively under Federal arbitration and conciliation the branch in New South Wales retains its registration under the Trade Union Act of 1881.

Statistics relating to the trade unions of employees in the State are shown in the following statement for various years since 1911; the figures are not quite complete as in every year some of the unions fail to supply returns to the Registrar:—

Year.	Unions of Employees	Members.			Receipts.	Expenditure.	Funds at end of Year.
		Males.	Females.	Total.			
1911	179	145,784	4,743	150,527	£ 157,202	£ 146,757	£ 112,494
1916	202	218,609	12,941	231,550	241,644	249,691	202,950
1917	218	216,553	15,726	232,279	252,613	289,426	149,783
1918	209	197,406	15,659	213,065	240,621	235,587	154,774
1919	199	208,684	17,052	225,736	276,382	269,056	156,018
1920	197	226,030	23,210	249,240	355,702	331,438	176,575
1921	197	234,898	23,965	258,863	363,067	345,854	194,360

At the end of the year 1921 there were 197 registered trade unions of employees, with a membership of 258,863, and funds amounting to £194,360. The membership has increased considerably since 1916, though it was affected in 1917 and 1918 by enlistments for war service, and by an industrial upheaval in the latter part of the year 1917. A striking feature of the comparison is the increase in the number of women members, which is a result of

the extension of the industrial arbitration system. The receipts during 1921 amounted to £363,067, including contributions, £335,193. Of the total expenditure, payments in respect of benefits amounted to £96,977, and management and other expenses, including legal charges in connection with industrial awards, etc., to £248,877. The total receipts and expenditure are liable to fluctuate under the influence of prevailing industrial conditions, the amounts being inflated in some years by the inclusion of donations for relief from one union to another.

The funds include cash and freehold property and such assets as shares in Trades Halls and newspapers; in the case of unions which are branches of federated unions the balance of funds at the close of the year is usually transferred to the credit of the central executive.

The following statement shows the receipts, expenditure, accumulated funds, and membership of trade unions of employees, according to industrial classification, in the year 1921 :—

Industrial Classification.	Receipts.	Expenditure.	Funds at end of year.	Membership at end of year.			Funds per member.
				Males.	Females.	Total.	
	£	£	£	No.	No.	No.	s. d.
Engineering and Metal Working ...	49,544	44,417	33,445	28,689	...	28,689	23 4
Food, Drink, and Narcotics ...	19,284	18,194	10,432	18,292	5,414	23,706	8 10
Clothing ...	7,134	7,178	10,461	4,888	6,803	11,691	17 11
Printing, Bookbinding, etc. ...	11,413	8,096	18,152	4,247	969	5,216	69 7
Manufacturing, n.e.i. ...	18,379	17,929	15,286	14,770	1,282	16,052	19 1
Building ...	24,630	22,511	23,521	28,130	60	28,190	16 8
Mining and Smelting ...	98,586	97,920	15,450	16,425	...	16,425	18 10
Railways and Tramways ...	15,949	14,751	7,702	27,794	200	27,994	5 6
Other Land Transport ...	6,815	7,536	3,850	7,787	...	7,787	8 7
Shipping and Sea Transport ...	6,266	6,611	3,258	6,410	16	6,426	5 2
Pastoral ...	47,630	47,880	19,238	27,365	109	27,474	14 0
Governmental, excluding Railways and Tramways ...	21,639	18,757	9,868	20,770	4,038	24,808	7 11
Miscellaneous Industries ...	31,488	30,085	14,152	29,331	5,074	34,405	8 3
Labour Councils and Federations ...	1,905	2,017	148	...	...	...	...
Eight-hour Committees ...	2,405	2,472	9,897	...	...	...	...
Total Unions of Employees...	363,067	345,854	194,360	234,898	23,965	258,863	15 0

The printing trade unions, a comparatively small group, hold the largest amount of accumulated funds per member, viz., £3 9s. 7d., the next in order being the engineering and metal-working unions, which form the most numerous group.

The largest individual union is the Australian Workers' Union in the pastoral group, with 25,416 members in 1921. Government employees constitute important groups of unions, and many of the workers employed in public utilities are members of craft unions. The railway and tramway unions include 28,000 members who, with few exceptions, are employed in the State services; there are 14 unions in the group, and the largest has a membership of 10,325. Other governmental unions embrace 24,800 members including the employees of municipal and shire councils, the largest being the Municipal and Shire Employees' Union, with 8,000 members; the Public School Teachers, 6,347, including 3,266 women; the Public Service Association, 3,664; and the Police Association, 2,325 members.

The numerical strength of employees' unions, excluding the Labour Councils, Federations, and Eight-hour Committees, is shown at quinquennial intervals since 1921, in the following statement :—

Membership.	1911.	1916.	1921.	Membership.	1911.	1916.	1921.
Less than 100 ...	49	44	36	7,000 to 8,000 ...	1	1	2
100 to 500 ...	60	65	60	8,000 „ 9,000 ...	...	2	2
500 „ 1,000 ...	23	21	31	10,000 „ 11,000 ...	...	...	1
1,000 „ 1,500 ...	14	10	16	11,000 „ 12,000 ...	1	...	1
1,500 „ 2,000 ...	6	8	9	20,000 „ 25,000 ...	1	...	...
2,000 „ 3,000 ...	9	17	13	25,000 and over ...	...	1	1
3,000 „ 4,000 ...	2	9	9	Not stated ..	3	5	1
4,000 „ 5,000 ...	1	5	4				
5,000 „ 6,000 ...	3	2	2				
6,000 „ 7,000 ...	...	2	3				
				Total ...	173	192	191

The average membership per union was 885 in 1911, 1,238 in 1916, and 1,348 in 1921 ; the majority of the unions are small, and 67 per cent. had a membership of less than 1,000 in 1921, the corresponding proportion in 1911 being 77 per cent.

A number of the unions are affiliated with Labour Councils, which have been formed in the main industrial centres, and efforts have been made to effect closer organisation, but they have not been attended with general success.

#### *Unions of Employers.*

The records of the Registry of Trade Unions show that few unions of employers seek registration under the Trade Union Act of 1881, so that the available information concerning them is scanty and does not afford any indication of the extent of organisation amongst employers.

Such unions are usually small compact bodies with adequate funds at their disposal to obtain the services of trained experts to undertake the work of their organisations in the conduct of collective bargaining, and the advocacy of their claims before the industrial tribunals, and for trade and political purposes. They do not require, as in the case of the larger and more unwieldy unions of employees, to have the scope of their operations rigidly defined by a set of registered rules.

The unions of employers registered under the Trade Union Act in 1921 numbered 16. The membership at the end of the year was 3,624, the receipts during 1921 amounted to £11,091, and the expenditure to £11,211. The funds at the end of the year amounted to £5,355.

Any employer or group of employers with at least 50 employees may register as an industrial union under the Industrial Arbitration Act; and in April, 1923, there were on the register 119 employers' unions, including the Employers' Federation, and unions of steamship owners, colliery proprietors, pastoralists, merchants, and nearly all classes of manufacturers. Statistics are not available regarding their membership or operations.

## INDUSTRIAL ARBITRATION.

The term "Industrial Arbitration" is used here in a broad sense to embrace all provision made by legislation for the adjustment of industrial relations between employers and employees, by arbitration, by conciliation, or by co-operation of employers and employees.

In New South Wales there are two systems of industrial arbitration: one under State law, its operation being confined to the area of the State; and the Commonwealth system, which applies to industrial disputes extending beyond the limits of one State.

For details regarding the development of industrial arbitration readers are referred to the 1921 issue of the Year Book, as only a brief outline of the main provisions of the existing legislation is published in this issue.

## THE STATE SYSTEM OF INDUSTRIAL ARBITRATION.

The fundamental principle of the State system is compulsory arbitration by a judicial tribunal—the Court of Industrial Arbitration—which adjudicates upon claims made by employers on one hand and by registered organisations of employees on the other. Machinery is provided, however, for conciliation and for collective bargaining, and a notable feature of the system is the statutory provision made for the determination of a standard living wage, as the basis of all rates of wages prescribed under the arbitration law.

*Industrial Unions.*

For the purpose of bringing an industry under the review of the industrial tribunals, the employees must be organised as a trade union under the Trade Union Act of 1881, and must obtain registration as an industrial union under the Industrial Arbitration Act. Registration for the purpose has been effected by practically all classes of employees throughout the State, except workers in rural industries, who are specifically excluded from the operation of the industrial arbitration system, and domestic workers in private houses, who are unorganised. In order to prevent a multiplicity of unions representing the same industrial interests, registration may be refused if the members of a claimant organisation may be protected in industrial matters by a previously registered union.

Registration as a union of employers may be granted to any person or group of persons employing not less than fifty employees, and prior registration under the Trade Union Act is not prescribed, as in the case of unions of employees.

*The Industrial Tribunals.*

The Court of Industrial Arbitration is a superior Court and a Court of Record, governed in procedure and decisions by the dictates of equity and good conscience. Judges of the Court are appointed permanently by the Governor, and the Court is constituted by a single judge or, in certain cases, by two or more judges sitting together.

In order to facilitate the determination of technical trade matters the Court may elect to sit with assessors representing the interests of each of the parties, and matters relating to any log of prices or other basis of payment may be committed for determination and report to the assessors, sitting without a judge.

Industrial Boards, consisting of nominees of employers and employees and a chairman, which were an important factor in the arbitration system prior to 1916, are still appointed, but their functions are exercised by the Court

except in the district of Broken Hill, where, on account of distance from the industrial centres, the Court seldom sits, and the local boards continue their activities.

The jurisdiction of the Court and of the Industrial Boards extends over a wide range of industrial matters, including the determination of minimum wages and salaries up to £10 per week or £525 per annum, piece-work prices, hours, overtime rates, number of apprentices, and preference to unionists.

Proceedings before an industrial tribunal are initiated usually upon the application of employers of not less than twenty employees in any industry or calling, or by an industrial union of employees. Matters may be referred also by the Ministerial head of the Department of Labour and Industry, and where the public interests are likely to be affected the Crown may intervene in any proceedings before a board or the Court, or may appeal from an award.

Awards take effect generally fourteen days after publication; they are binding on all persons engaged in the industries or callings, and within the locality covered, for a period not exceeding three years specified therein, and after such period until varied or rescinded.

Variations of awards may be made, but it is a general rule that awards should not be varied during their currency, except in special cases, or by consent of the parties. It is provided, however, that applications for variation must be considered whenever a living wage declaration has been made by the Board of Trade.

Appeal from an award of a board lies to the Court, but the pendency of an appeal does not suspend the operation of the award. Appeal from an award of a single judge lies to the Court constituted by three judges. Decisions of the Full Court are final.

#### *Conciliation.*

Under provisions respecting conciliation an officer of the Department of Labour and Industry has been appointed a Special Commissioner with authority to intervene in industrial disputes. Whenever a question has arisen that might lead to industrial strife, or when a dislocation has occurred, the Commissioner may summon the persons concerned to meet in conference.

In the majority of cases in which conferences are held, agreement is reached before dislocation occurs, and many disputes have been settled during preliminary investigations by the Commissioner or the departmental inspectors.

Further provision for conciliation may be made by the appointment of conciliation committees consisting of a chairman and two or four members equally representing employers and employees. Such committees may be appointed for certain industrial districts, and for occupations in which more than 100 employees are engaged. A conciliation committee may inquire into any industrial matter within its district or concerning the occupation to which it relates; it has no compulsory powers, but if an agreement is made and registered it has the effect of an industrial agreement. Since 1918, when general statutory provision was made for the constitution of conciliation committees, eleven have been appointed and ten were in existence in January, 1923.

#### *Industrial Agreements.*

Industrial and trade unions are empowered to make with employers written agreements, which become binding between the parties when filed in the prescribed manner.

The maximum term for which an agreement may be made is five years, but it continues in force after the expiration of the specified term until varied or rescinded, or terminated after notice by a party thereto. An industrial agreement may not provide for wages lower than the living wages declared by the Board of Trade, and whenever a living wage is declared by the Board during the currency of an agreement the Court may vary its wage provisions.

The following statement shows the number of agreements filed in each year since 1902. In December, 1922, there were 116 agreements in force:—

Year.	Agreements Filed.	Year.	Agreements Filed.	Year.	Agreements Filed.
1902 }	28	1909	28	1916	51
1903 }		1910	21	1917	43
1904	18	1911	27	1918	39
1905	6	1912	45	1919	49
1906	13	1913	36	1920	76
1907	11	1914	50	1921	56
1908	12	1915	33	1922	57

Collective bargaining is practised more extensively than is indicated by the figures in the table, and the terms of many awards are arranged, wholly or in part, by the parties before the cases are taken before the Court.

#### *Industrial Awards.*

During the year ended 30th June, 1922, the Industrial Boards made one principal award and two awards of variation, and the Court of Industrial Arbitration made 80 principal awards, and 272 variations. At the end of the period there were 320 awards in force, excluding three awards of special demarcation boards.

The number of awards made by the boards and by the Court during each of the last seven years is shown below:—

Year ended 30th June.	Industrial Boards.		Awards made by Boards.		Awards made by Court of Industrial Arbitration.	
	In existence at 30th June.	Cost during the Year.	Principal.	Variation.	Principal.	Variation.
		£				
1916	233	14,211	151	135	...	66
1917	237	12,900	169	99	7	127
1918	237	1,543	18	15	75	116
1919	238	277	3	2	106	88
1920	252	345	5	1	136	269
1921	271	183	9	1	104	390
1922	276	101	1	2	80	272

Complaints regarding breaches of award and industrial agreements may be lodged with the Investigation Officer of the Labour and Industry Department, who may obtain reports of inspectors thereon, and may direct prosecutions. Proceedings may be taken also by employers and by the secretaries of industrial unions, and the cases are dealt with by the Industrial Registrar or the industrial magistrates. If the rates of wages fixed by award or agreement have not been paid to an employee he may take proceedings before the Industrial Registrar or industrial magistrates, or may sue in a District Court or a Court of Petty Sessions. Appeal from the decisions of the Registrar or of the industrial magistrates lies to the Court of Industrial Arbitration.

Particulars concerning the cases heard by the Industrial Magistrates during the last three years are shown below:—

Offences.	1920.		1921.		1922.	
	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.
Non-payment of Wages Awarded ...	137	37	152	76	179	64
Non-payment of Fines and Subscriptions to Union ...	351	158	393	161	463	188
Breach of Award or Industrial Agreement ...	347	268	549	448	581	521
Other Offences ...	64	59	177	167	210	207
Total ...	899	522	1,271	852	1,433	980

In 1922 an aggregate amount of £2,551 was ordered to be paid as penalties, wages, subscriptions, etc., and costs amounted to £665.

#### THE BOARD OF TRADE.

The Board of Trade, which was created in June, 1918, is composed of a president (who is a judge of the Court of Industrial Arbitration), a deputy president, and four commissioners, appointed for a term of five years.

Its most important administrative function is the determination of the living wages for men and for women, which are the basis of the wage determinations of the other industrial tribunals.

The Board declares the living wages, after public inquiry as to the increase or decrease in the average cost of living, at such times as it thinks fit, but at intervals of not less than three months. The rates declared for each sex are the lowest which may be prescribed by industrial awards or agreements, but under certain conditions which are stated on page 466, an industry may be excluded from the operation of an award or agreement.

Prior to November, 1922, the Board made separate decisions regarding the living wages for rural employees, and four additional commissioners representing the rural industries sat with the Board when such matters were under consideration. But the Industrial Arbitration Amendment Act of 1922 repealed the provisions of former legislation which authorised the Board to make declarations regarding rural workers.

The Board is authorised to exercise control over matters relating to apprentices and apprenticeship, but its powers in this respect have not become fully operative; its other functions are advisory.

#### THE COMMONWEALTH SYSTEM OF INDUSTRIAL ARBITRATION.

The Commonwealth system of industrial arbitration applies only to disputes which extend beyond the limits of any State. It differs from the State system in many important features, *e.g.*, powers of compulsory arbitration are exercised only when conciliation has failed; the jurisdiction of the Court of Conciliation and Arbitration is limited to cases in which industrial disputes have occurred or are impending; the Court has not the power to declare an award a common rule in an industry; and its determinations are binding only on the parties to the dispute, *viz.*, the employees cited in a case and the members of the unions concerned, who are employed by them.

Organisations of employers and of employees, representing at least 100 employees, may be registered on compliance with prescribed conditions,

registration being a necessary qualification to entitle unions to submit disputes to the Court, or to be represented in proceedings relating to disputes.

The Court of Conciliation and Arbitration consists of a President and Deputy-Presidents appointed by the Governor-General. The President is appointed from among the Justices of the High Court. The Deputy-Presidents are appointed from the Justices of the High Court, Judges of the Supreme Court of a State, or barristers or solicitors of any of these Courts of not less than five years standing.

The President is charged with the duty of endeavouring to reconcile the parties to industrial disputes, and for the purpose he may convene compulsory conferences.

The Court endeavours to induce the settlement of disputes by amicable agreement, or, failing an agreement, determines the disputes by award. Industrial agreements, when filed, are binding on the parties thereto. The awards and agreements are made for a specified period up to a maximum of five years, and after the expiration of the definite period an award continues until a new award is made, unless the Court orders otherwise; agreements continue unless rescinded, or terminated by notice.

The powers conferred upon the Federal Court include the power to determine rates of wages, hours, and other conditions of employment; to vary orders or awards; to impose penalties for breach or non-observance of orders, etc.; to refrain from determining a dispute if it appears that it should be dealt with by a State industrial authority, or that further proceedings by the Court are not desirable in the public interest; to refer any matters temporarily to a conciliation committee consisting of an equal number of representatives of employers and employees; and to grant preference to members of organisations.

The Court may appoint Boards of Reference to deal with matters relating to an award, and their appointment tends to promote mutual understanding between employers and workers for the adjustment of industrial relations.

Provision is made by the Industrial Peace Acts of 1920 for the formation of a Commonwealth Council of Industrial Representatives, consisting of persons equally representing the employers and the recognised organisations of employees and a chairman to consider matters affecting industrial peace, and to investigate industrial matters. Similarly District Councils may be constituted for any State or part of the Commonwealth. Action has not yet been taken for the formation of any of these councils.

The Industrial Peace Acts provide also for the appointment of special tribunals with powers to deal with industrial disputes similar to those exercised by the Court of Conciliation and Arbitration or by the President of the Court. A special tribunal consists of an equal number of representatives of employers and employees, and a chairman. Local boards may be appointed to exercise jurisdiction within defined limits for the settlement or prevention of disputes, their determinations being subject to review by the special tribunal.

An award or order of a special tribunal, or an agreement made at a conference and filed with the Industrial Registrar, is binding on the parties, and may be enforced as an award of the Court, and the Court may not make an order or award inconsistent with a determination of a special tribunal or of a local board.



Special tribunals under the Industrial Peace Act have been appointed in connection with the coal and shale, the coke, and the shipbuilding industries, the first mentioned being of special importance in New South Wales, where the bulk of the coal is produced.

At 30th June, 1922, there were 86 awards of the Commonwealth Court, and 541 industrial agreements in force, of which 49 awards and 96 agreements applied in New South Wales.

Among the important industries subject to Federal awards and agreements are shipping, pastoral, coal-mining, shipbuilding, timber trades, clothing factories, breweries, glass works, and rubber works.

*Relation between State and Commonwealth Systems.*

The relation between the State and Commonwealth systems in respect of industrial awards and orders rests upon the provision of the Commonwealth Constitution Act that if a State law is inconsistent with a Federal law, the latter prevails, the former becoming inoperative so far as it is inconsistent. There is, however, no organic connection between the industrial systems: and while the industrial authorities have adopted generally the same broad principles for the promotion of industrial peace and the maintenance of standard conditions, fundamental differences in legislation prevent them from co-ordinating their methods and practices and from blending their determinations into an industrial code for the guidance of employees and employers in all branches of industry throughout the Commonwealth. Thus differences arise in regard to wage determinations, which are liable to cause disaffection by disturbing the distinctions in grade, as expressed by wages, which have been recognised for many years amongst skilled workers. The overlapping of jurisdiction also tends to confusion, especially in industries giving employment to members of a number of craft unions, each working under a separate award or agreement.

Efforts have been made to devise a plan whereby the sphere of each system would be defined and the determinations harmonised, especially those affecting wages and hours. The matter is under consideration by the Federal Government and the Governments of the several States; proposals were submitted to a recent conference of Premiers to classify certain industries as Federal and to place them under the legislative power of the Commonwealth; to create a tribunal representing the Commonwealth and the States to revise periodically the list of Federal industries, and to review the determinations of the State industrial authorities, or to make an order where there is no such determination, in any case where an industry in a State is prejudiced substantially by interstate competition by reason of a State determination or the absence thereof; and to exclude State instrumentalities from the industrial power of the Commonwealth.

**CROWN EMPLOYEES UNDER ARBITRATION.**

Under the State arbitration system, employees of the State Government and of governmental agencies, with the exception of those employed in terms of the Public Service Acts and the police, have access to the industrial tribunals for the settlement of disputes and the regulation of the conditions of their employment. In the case of the employees under the Public Service Acts the right was extended to them by the amending Act of 1919; the jurisdiction was limited to matters relating to wages, payment for overtime, deductions for board, residence, or customary privileges or payments in kind, other matters being regulated by the Public Service Board. In 1922 the law was amended again to exclude such employees from the industrial arbitration system and provision was made for the determination of salaries

up to £525 per annum by committees consisting of three persons representing the Public Service Board, the class of employees concerned, and the department in which they are engaged. A tribunal consisting of a judge and two members of the Public Service Board is authorised to hear appeals against the decisions of the committees or of the Board in relation to grading, classification of work, salaries, etc. All determinations relating to remuneration are subject to the necessary provision being made by Parliament.

The rates of pay and terms and conditions of employment in the public services of the Commonwealth are regulated by a special tribunal constituted by an arbitrator appointed by the Governor-General to deal exclusively with the public services. There is no appeal against the decisions of the arbitrator but they do not come into operation until they have been laid before both Houses of the Commonwealth Parliament.

#### HOURS OF WORK.

The 8-hour day has been recognised for many years as the standard working day in New South Wales, although the standard is more correctly expressed as the 48-hour week, the usual working time being  $8\frac{1}{2}$  hours on 5 days and  $4\frac{1}{2}$  hours on Saturday, though some factories complete the week's work in 5 days, leaving Saturday a whole holiday. When work is continued beyond the ordinary working hours special rates of wages must be paid—usually 25 or 50 per cent., and in some trades 100 per cent. higher than the normal rates.

The Factories and Shops Act prohibits the employment in factories of youths under 16 and of women for more than 48 hours in any week, though overtime not exceeding 3 hours in any day is allowed on 30 days in a year, or by written permission of the Minister, on 60 days.

Hours of employment in shops are restricted by the Early Closing Acts; except in the case of specified shops, only one late shopping night is allowed, when the closing hour must not be later than 10 o'clock; on four days a week the shops must close at 6 o'clock, and on one day at 1 o'clock. In the Metropolitan and Newcastle districts, and in the country shopping districts in the county of Northumberland, the shops are subject to the Saturday Half-holiday Act, and the late closing night is on Friday, and the 1 o'clock closing on Saturday; in other districts the half-holiday is either on Wednesday with the late night on Saturday, or on Saturday with the late night on Friday.

In metalliferous mines, the Eight Hours Act prescribes that workmen may not be employed below ground for more than 8 hours during 24 hours, or 88 hours in 14 days, or 132 hours in 21 days; and a shift may not exceed 6 hours, if, during 4 hours, the temperature is above 81 degrees Fahrenheit. In the coal-mining industry the hours as fixed by a special tribunal in 1916 are as follows:—Eight hours bank to bank, inclusive of one half-hour for meal time, on Monday to Friday, and 6 hours bank to bank, inclusive of one-half hour for meal time, on Saturday, Sunday, and holidays, the usual number of shifts being eleven per fortnight.

The Eight Hours Act of 1916, and its amendments, provide that the ordinary working hours in industries generally may not exceed 8 per day on 6 consecutive days, or 48 per week, or 96 in 14 consecutive days,—as determined by industrial award or agreement. Overtime may be permitted by the terms of an award or agreement, and the ordinary hours in any industry may be increased by the Court of Industrial Arbitration if the public interest requires it and the health of the employees will not be injured thereby.

In the 1921 issue of the Year Book particulars were published regarding an amendment of the Eight Hours Act passed in 1920, by which a Special Court was constituted in February, 1921, to inquire into the working hours of the various industries; as a result of its recommendations, which were embodied in proclamations, a 44-hour week was introduced in almost all the important industries under the jurisdiction of the State Court of Industrial Arbitration. In September, 1922, however, the amendment was repealed, and the provisions of the Act of 1916, as stated above, were restored; it was provided that the hours as proclaimed upon the recommendation of the Special Court should continue until varied by awards of the Court of Industrial Arbitration or by agreements, and most of the industries have since reverted to the 48-hour week. A shorter working week is prescribed for those trades which are recognised as unhealthy, such as rock-chopping and sewer-mining—for which the hours vary according to the working conditions, the minimum being 25 per week—stone-masonry, and metalliferous mining (underground); and for industries in which the majority of the workers are women. The workers whose hours exceed 48 per week are mainly in the domestic group, *e.g.*, hotel employees; and in establishments involving continuous process, where seven shifts of eight hours are allowed, with higher rates for work on Sundays and holidays. In the railway, tramway, and ferry services, the prescribed hours are usually 96 per fortnight, with special rates for Sunday work.

Until 1920 it was the general practice of the Commonwealth Court of Conciliation and Arbitration to adhere to the standard hours of 48 per week, and shorter hours were granted only in exceptional cases, *e.g.*, to miners working below ground, to builders' labourers who are required to spend much time in travelling to jobs, and to clothing factory hands, who are mostly women. In 1920 the President announced his intention of reducing the standard hours, and awarded a 44-hour week in respect of two claims before the Court, *viz.*, timber-workers and engineers.

Meanwhile the law was amended to provide that an award increasing the hours of work in any industry, or reducing them, unless they are over 48 per week, may be made only after the case has been heard by the President and at least two Deputy Presidents, and approved by a majority of the Court thus constituted. In November, 1921, the Full Court heard claims submitted by several unions for a reduction of hours, and decided that in view of the prevailing economic conditions it would not be justified in reducing the hours from 48 per week to 44, and, subsequently, the 48-hour week was restored in the timber-working and engineering industries.

#### PREFERENCE TO UNIONISTS.

In the majority of the State industrial awards a clause has been inserted granting preference to unionists, subject to the provisions of the Returned Soldiers and Sailors' Employment Act of 1919. In occasional cases preference has been made subject to restrictions providing that the existing employment of non-unionists should not be prejudiced, and that preference should not be extended to women. In a few cases the preference clause is in the nature of a prohibition of discrimination against unionists.

Preference may not be granted to members of a trade or industrial union who shall have taken part in, aided, or abetted an illegal strike after the passing of the Industrial Arbitration (Amendment) Act, 1918; and any declaration granting preference may be cancelled by the Court if the union, or any substantial number of its members, takes part in a strike. If a lesser number takes part in a strike, the Court may suspend the declaration,

In accordance with the Returned Soldiers and Sailors' Employment Act of 1919, preference in employment must be given, notwithstanding any industrial award or agreement, to members of the military and naval forces who have returned from active service abroad.

The Commonwealth Court is authorised to grant preference to members of registered organisations, but it is the usual practice to refuse to order preference in cases of respondents who undertake not to discriminate. An award, order, or agreement under the Commonwealth arbitration system may not operate to prevent the employment of returned soldiers or sailors.

#### APPRENTICESHIP.

Conditions of apprenticeship in New South Wales are subject to general regulation in terms of the Apprentices Act of 1901, which prescribes that children may not be indentured until they reach the age of 14 years, the maximum term of apprenticeship being seven years; the hours of work may not exceed 48 per week, except in farming occupations and in domestic service. An amendment of the Act was made in 1915 to protect the interests of apprentices enlisting for active naval or military service.

The Industrial Arbitration Act confers upon the industrial tribunals authority to attach certain conditions to the employment of apprentices, the term being defined to include all employees under 22 years of age serving a period of training under indenture or other written contract for the purpose of rendering them fit to be qualified workers in an industry. Thus, the conditions in nearly all the skilled occupations in which apprenticeship is a recognised custom are determined by industrial awards and agreements which fix the number, or proportionate number, of apprentices, the term of apprenticeship, minimum rates of wages, etc., and some of the awards contain provisions for encouraging apprentices to attend trade schools and technical classes relating to their occupations. Generally, the period of apprenticeship for boys is five years, and they are indentured at the age of 16 years in order to complete the term before reaching the age of 22 years, when they are classified as journeymen. In the clothing trades, and in a few other manufacturing industries, girls are apprenticed, usually for four years.

The Board of Trade, which was invested with important powers and functions in relation to apprentices and juvenile workers, has conducted extensive investigations, and has prepared a draft of proposed regulations, but its plans have not been put into operation.

#### INDUSTRIAL DISLOCATIONS CONTINGENT UPON DISPUTES.

Within the jurisdiction of the Commonwealth Conciliation and Arbitration Act lockouts and strikes are prohibited under a penalty of £1,000. Under the State law strikes may be recognised as lawful if fourteen days' notice of the intention to strike has been given to the Minister for Labour and Industry, except strikes by employees of the Government or of Municipal and Shire Councils, or by workers engaged in military or naval contracts. Strikes are illegal also in industries in which conditions of employment are regulated by award or agreement, unless the award has been in operation for at least twelve months and the union has decided by a secret ballot to withdraw from its conditions. When a strike is contemplated, or at any time during a strike, the Minister may direct a secret ballot to be taken in order to ascertain whether the majority of the unionists concerned is or is not in favour of the strike.

The maximum penalty for being concerned in a lockout is £1,000, and for an illegal strike £500 in the case of a union, and £50, or six months' imprisonment, in regard to an individual. Penalties may be imposed also for obstructing a ballot, for picketing in connection with an

illegal strike, or for inducing persons to refrain from handling any commodity during a strike.

*Particulars of Dislocations.*

Apparently the provision of machinery under State and Federal legislation for the adjustment of industrial relations between employers and workers has not led to an actual decrease in industrial unrest during the past nine years, but in view of the abnormal conditions which prevailed throughout the period it is not possible to estimate the practical effect of the legislation in preventing possible dislocations or in promoting a settlement when actual strife has occurred.

Records relating to industrial dislocations contingent upon disputes in all classes of industry in New South Wales are kept by the Department of Labour and Industry. Data are obtained principally from reports by police officers, departmental inspectors, and managers of coal-mines, also from managers of other industrial establishments, from union secretaries, and from newspapers and trade journals.

In the compilation of the tables relating to industrial dislocations contingent upon disputes, it is the rule of the Department of Labour in counting the number of dislocations to consider that the cessation of work contingent upon any one dispute constitutes only one dislocation; for example, if a section of employees in an industry ceases work and the dispute extends subsequently to other employees in that industry in the same or in other localities, one dislocation is recorded. On the other hand, if employees in other industries cease work in sympathy with the militant unions, the sympathy strikes are counted as another dislocation, that is, one in addition to the original dislocation.

In the coal-mining industry, when the action of one section of the employees has caused a complete cessation of the operations of the mine, the number counted is the full complement of the mine; but where a section has ceased work and the operations of the mine have continued, only those who ceased work have been included as workers involved.

In calculating the working days lost, only actual working days, viz., days on which work would ordinarily be performed, have been counted, but apparently no allowance has been made for intermittency of employment, and it has been assumed that if the dispute had not occurred work would have been continuous during the period of its currency.

The following statement shows, so far as can be ascertained, the number of workers involved, and the time lost by industrial dislocations contingent upon disputes in each year since 1914. Particulars are shown separately regarding dislocations which originated during the year specified, and those which commenced at an earlier date:—

Year.	Dislocations.			Workers Involved.			Working Days Lost during Year.		
	An- terior.	New.	Total.	Anterior.	New.	Total.	Anterior.	New.	Total.
1914	6	313	319	631	75,256	75,887	9,418	747,737	757,155
1915	7	314	321	3,716	94,346	98,062	164,035	470,207	634,242
1916	5	344	349	5,144	157,102	162,246	261,887	895,338	1,157,225
1917	5	289	294	1,294	144,704	145,998	18,813	2,857,515	2,876,328
1918	1	152	153	340	38,652	38,992	4,080	186,344	190,424
1919	7	306	313	1,949	123,174	125,123	19,484	2,113,114	2,132,598
1920	9	411	420	10,023	151,018	161,041	1,558,634	741,744	2,300,378
1921	4	555	559	20,597	169,510	190,107	227,645	438,273	665,918
1922	3	479	482	358	188,861	189,219	733	587,726	588,459

The loss of working time was greatest in the year 1917, due to a dispute which originated in the Government railway workshops and extended to other industries, until the number of workers involved rose to 73,536, and a loss of 2,563,100 days was incurred. In 1919 and 1920 the principal dislocation was caused by a dispute which occurred at the Broken Hill mines, 6,375 workers were involved and 2,706,493 working days were lost, viz., 1,241,552 in 1919 and 1,464,941 in 1920.

A classification of the dislocations according to mining and non-mining industries reveals the fact that disputes leading to a suspension of work occur more frequently and are more extensive in the mining industry than in all other industries combined. The following statement shows the particulars in relation to each group of the dislocations which commenced in each year from 1914 to 1922; the working days lost have been assigned to the year in which the dislocation commenced, and for this reason the figures differ from those in the previous table, which show the loss actually occurring during each year.

Year.	Dislocations.			Workers Involved.			Working Days Lost.		
	Mining.	Non-mining.	Total.	Mining.	Non-mining.	Total.	Mining.	Non-mining.	Total.
1914	220	93	313	56,372	18,884	75,256	732,294	179,478	911,772
1915	225	89	314	66,211	28,135	94,346	576,109	162,386	738,495
1916	209	135	344	129,920	27,182	157,102	649,292	258,458	907,750
1917	185	104	289	77,147	67,557	144,704	1,184,594	1,677,001	2,861,595
1918	106	46	152	33,246	8,406	33,652	104,751	101,077	205,828
1919	228	78	306	86,778	36,396	123,174	2,958,056	713,692	3,671,748
1920	351	60	411	109,464	41,554	151,018	316,823	652,566	969,389
1921	531	24	555	145,282	24,228	169,510	360,652	78,354	439,006
1922	417	62	479	171,327	17,534	188,861	470,972	144,897	615,869

The dislocation which involved the greatest loss of working time in 1922 occurred in the engineering trades in November, as the result of a dispute regarding the restoration of the 48-hour week; 894 workers were involved and 53,176 days were lost.

It is difficult to obtain reliable information regarding the cost of industrial dislocations, especially during a period of abnormal industrial conditions and frequent changes in rates of wages, etc. An estimate of the losses in wages in each of the last ten years is shown below, the method adopted being as follows:—The working days lost were classified into the fourteen industrial groups for which the average rates of wages are shown subsequently in this chapter, the days being assigned to the year in which the dislocation commenced; the days lost in respect of each group in each year were then multiplied by the rate of wages which is the mean of the average rate for adult males in that group, as at the end of that year and at the end of the previous year.

Year.	Working Days Lost.			Estimated Loss of Wages.		
	Mining.	Non-mining.	All Industries.	Mining.	Non-mining.	All Industries.
	Days.	Days.	Days.	£	£	£
1913	237,577	129,196	366,773	123,700	57,100	180,800
1914	732,294	179,478	911,772	384,500	86,000	470,500
1915	576,109	162,386	738,495	308,500	74,700	383,200
1916	649,292	258,458	907,750	372,000	133,100	505,100
1917	1,184,594	1,677,001	2,861,595	730,500	879,400	1,609,900
1918	104,751	101,077	205,828	65,900	54,900	120,800
1919	2,958,056	713,692	3,671,748	1,990,600	420,100	2,410,700
1920	316,823	652,566	969,389	252,800	485,100	737,900
1921	360,652	78,354	439,006	317,100	66,600	383,700
1922	470,972	144,897	615,869	411,100	115,400	526,500

The above quotations of estimated loss of wages are open to question in so far as the records are deficient in regard to the sex and age of the workers involved, therefore allowance has not been made for the proportion of women and juveniles; the proportion is small, however, as the dislocations were relatively unimportant in industries in which women and juveniles are mainly employed. Another factor for which allowance cannot be made is the extent to which losses in wages during a dislocation were compensated by higher rates of pay or increased activity after resumption of work, *e.g.*, in the coal-mining industry, where operations are affected in normal times by intermittency due to trade conditions or blocks in the transport system.

Information is given in the following table regarding the duration of the dislocations which originated during the year 1922:—

Duration in Working Days.	Dislocations.	Workers Involved.	Working Days Lost.
Under 1 day ... ..	28	12,889	6,547
One day ... ..	239	102,633	102,633
Over 1 and not exceeding 7 ...	154	55,215	183,474
„ 7 „ „ 14 ...	30	11,465	106,099
„ 14 „ „ 21 ...	13	3,343	51,054
„ 21 „ „ 28 ...	2	800	18,400
„ 28 „ „ 50 ...	8	1,005	33,412
„ 50 ... ..	5	1,511	114,250
Total ... ..	479	188,861	615,869

A very large proportion of the dislocations are of brief duration. The number of workers affected by dislocations lasting one day or less during 1922 was 115,522, and the loss of working days 109,180. Thus these brief dislocations accounted for approximately 56 per cent. of the total number, 61 per cent. of the workers involved, and 18 per cent. of the working days lost.

The causes of the disputes which led to dislocations in the mining industries and in the non-mining group are classified in the following statement. Dislocations arising from the employment of non-union labour are included in the category, “employment of persons, etc.”; but those pertaining to the recognition of a union and the enforcement of union rules are classified under the head of “Trade Unionism.”

Cause.	Mining.			Non-Mining.			All Industries.		
	Dislocations.	Workers involved.	Working days lost.	Dislocations.	Workers involved.	Working days lost.	Dislocations.	Workers involved.	Working days lost.
Wages .. ..	69	33,962	137,999	19	2,449	23,268	88	36,411	161,267
Hours .. ..	20	5,158	6,994	12	7,346	76,142	32	12,504	83,136
Working conditions ..	118	50,355	138,576	6	833	4,226	124	51,188	142,892
Employment of persons or classes of persons ..	123	37,016	118,495	18	3,195	39,347	141	40,211	157,842
Trade unionism .. ..	8	2,483	10,801	1	2	72	9	2,485	10,873
Sympathy .. ..	3	1,153	6,526	..	..	..	3	1,158	6,526
Miscellaneous .. ..	55	35,892	43,909	6	3,709	1,842	61	39,511	45,751
Not stated .. ..	21	5,393	8,172	..	..	..	21	5,393	8,172
Total .. ..	417	171,327	470,972	62	17,534	144,897	479	188,861	615,869

In the mining industries disagreements about working conditions and wages involved the greatest loss of working time, *viz.*, 29 per cent. in respect

of each cause ; but the greatest number of dislocations were the result of disputes relating to the employment of persons, to which 25 per cent. of the loss was due. In the non-mining group the important cause of dissension was the question of hours of work, nearly 53 per cent. of the working time lost being due to such disputes.

By extending the analysis of the causes of disputes over a period of nine years from 1914 to 1922, it is found that in the mining industries 39 per cent. of the time lost was due to disagreements in relation to trade unionism. Disputes arising out of the question of hours of work were the cause of 18 per cent., those grouped under the heading of "Sympathy" were responsible for 14 per cent., and "wages" stands fourth on the list with 12 per cent.

In non-mining industries, on the other hand, wages was the subject of disputes, which were responsible for greater loss than those arising from any other cause, viz., 34 per cent. of the total, and sympathetic strikes showed the high proportion of 23 per cent., hours 20 per cent., and working conditions 18 per cent.

Taking all classes of industries together, the experience of the last nine years shows that about one-fourth of the loss of working time was incurred through disputes about trade unionism and somewhat less than one-fifth was attributed to each of the causes—wages, hours, and sympathy.

In 1922, matters in dispute in regard to 404 dislocations were adjusted by direct negotiation between the parties, after a loss of 523,157 days ; 31 dislocations, involving a loss of 53,182 days, were brought to conclusion as the result of arbitration, and in 5 cases, with a loss of 9,491 working days, the workers were replaced. Of the balance, some were dislocations in which demands were not formulated, the cessation of work being for the purposes of demonstration, sympathy, etc., and in the other cases the method of settlement was not recorded.

Of the dislocations which commenced in 1922, 66, involving a loss of 51,898 working days, resulted in modifications more or less in accordance with the workers' claims, but modifications were not made in regard to the majority of disputes, viz., 317, which caused a loss of 517,025 days ; the results of the remaining cases were not recorded.

#### INDUSTRIAL HYGIENE.

Legislation, with the object of safeguarding industrial workers from accident and disease, is included in the Factories and Shops Act, 1912, the Shearers Accommodation Act, 1901, the Scaffolding and Lifts Act, 1912, the Mines and Inspection Acts, 1901 and 1914, and the Coal Mines Regulation Acts, 1912 to 1922. The Acts relating to mining are administered by the Department of Mines ; otherwise, inspection with the object of securing compliance with the industrial laws is a function of the Department of Labour and Industry.

The Factories and Shops Act, 1912, which consolidates previous enactments, provides for the sanitation of factories, etc., the safeguarding of machinery, and protection from fire. Restrictions are placed upon the employment of women and of juveniles, especially in regard to overtime and in dangerous occupations. Occupiers of factories are required to keep and to supply to the inspectors full records regarding out-workers employed, and in terms of certain industrial awards the employment of out-workers is allowed only by special permission. Details relating to the employment of women and children in factories are shown in the chapter, "Manufacturing Industry."



Under the Shearers' Accommodation Act, 1901, station owners are required to provide proper accommodation for shearers; the Act applies only to shearing-sheds where at least 6 shearers are employed.

The Scaffolding and Lifts Act, 1912, regulates the construction and use of scaffolding, lifts, cranes, hoists, and derricks. The Act operates in the Metropolitan Police District and in the Newcastle District. On 31st December, 1922, there were 2,682 lifts under supervision as compared with 2,575 in 1921. Since 1909 persons operating passenger lifts have been required to obtain certificates of competency.

An interstate conference on industrial hygiene was held in Sydney in September, 1922, between delegates representing the Federal Department of Health and the departments controlling public health matters and factory inspection in each State of the Commonwealth. Resolutions were passed in favour of the medical inspection of factory workers under 18 years of age, a uniform minimum age for employment in factories, viz., for boys 14 years and for girls 15 years, legislation to control employment in dangerous occupations, the collection of statistics of industrial morbidity and accidents, and the standardisation of qualifications of factory inspectors.

#### *Industrial Accidents.*

In regard to the factories, accidents, fatal or otherwise, are reported to the factory inspectors, upon whom rests the responsibility of seeing that all dangerous portions of machinery are properly and securely fenced and guarded. Special regulations have been made regarding precautions against the risk of accident in connection with the use of steam boilers and other pressure vessels.

The following table shows the accidents reported in factories during the three years, 1919 to 1921, and the accident rate per 10,000 employees:—

Accidents.	Number.			Rate per 10,000 Employees.		
	1919.	1920.	1921.	1919.	1920.	1921.
Fatal ... ..	14	10	10	1.25	.82	.81
Partial disablement ... ..	122	130	136	10.94	10.70	10.95
Temporary incapacitation ... ..	565	644	598	50.66	53.02	48.14
Total ... ..	701	784	744	62.85	64.54	59.90

On the figures shown above, about 1½ per cent. of the accidents were fatal, and over 80 per cent. caused temporary incapacitation; records are not available to show the time lost through mishaps.

During the year 1921 there were 15 fatal and 49 non-fatal accidents in connection with lifts, scaffolding, cranes, and boilers. Particulars of accidents in mines and of railway and tramway accidents are shown in other chapters of this Year Book.

#### *Industrial Diseases.*

Reliable records relating to industrial diseases are not available; but certain occupations are, with good reason, regarded as unhealthy, and provision has been made under the Workmen's Compensation Acts in respect of certain occupational diseases. In the majority of unhealthy or noxious trades the hours are short and the wages are comparatively high.

Regulations under the Factories and Shops Act have been framed with a view to minimising the risk of industrial diseases, and the use of white phosphorus in match factories has been prohibited by the White Phosphorus Matches Prohibition Act, 1915.

The Board of Trade has conducted investigations into the incidence of several industrial diseases. As the result of its activities a technical commission was appointed in 1919 to report upon the incidence of miners' phthisis and other occupational diseases, and legislation was enacted to provide for compensation in respect to cases of silicosis amongst stonemasons, quarrymen, etc., and cases of pneumoconiosis, tuberculosis, and lead-poisoning amongst the miners of Broken Hill.

After an investigation regarding lead-poisoning in the painting industry, the Board did not favour the immediate prohibition or restriction of the use of white lead, as few deaths of painters are attributed directly to lead-poisoning, but it recommended that regulations should be promulgated with the object of reducing and ultimately preventing any injurious effects. At the International Labour Conference held in Geneva in November, 1921, consideration was given to the question of prohibiting the use of white lead in painting; prohibition or restriction was opposed by the Australian delegates on the ground that the risk may be minimised by strict attention to personal cleanliness. A draft convention was adopted, however, to provide for partial prohibition in respect of the internal painting of buildings; if the convention is ratified in accordance with the Treaty of Versailles, this section will come into force at the end of the year 1927. Other clauses provide for regulating the use of white lead in other operations.

#### WORKMEN'S COMPENSATION.

The State law relating to workmen's compensation is contained in the Workmen's Compensation Acts, 1916 and 1920, the Workmen's Compensation (Silicosis) Act, 1920, the Workmen's Compensation (Broken Hill) Act, 1920, and the Workmen's Compensation (Lead Poisoning—Broken Hill) Act, 1922.

The Workmen's Compensation Acts, 1916 and 1920, relate to all employees whose remuneration does not exceed £525 per annum, the wage limit having been increased from £312 to £525 per annum in 1920; the exceptions are casual hands employed otherwise than for the purpose of the employer's trade or business, members of the police force, outworkers, and members of the employer's family dwelling in his house.

The Acts apply in respect of certain industrial diseases, as specified in a schedule, and in respect of accidents which cause disablement for at least one week. Seamen employed on ships whose first port of clearance and whose destination are in New South Wales may claim compensation under these Acts, if they agree not to proceed also under the Seamen's Compensation Act of the Commonwealth.

The amount of compensation in cases where death results from the injury is as follows :—

If workman leaves persons wholly dependent upon his earnings, a sum equal to three years' earnings, or £300, whichever is the larger sum; but not exceeding £500.

If workman leaves persons in part dependent, a sum agreed upon or fixed by arbitration.

If he leaves no dependents, expenses of medical attendance and burial up to £20.

Where total or partial incapacity for work results from the injury, a workman is entitled to a weekly payment during the incapacity not exceeding two-thirds of his average weekly earnings; such weekly payment may not exceed £3, and the total liability in respect thereof may not exceed £750.

If a workman under 21 years of age is totally incapacitated he may be paid 100 per cent. of his average weekly earnings, but the weekly payment may not exceed 15s.

Provision is made whereby an employer may contract with his workmen, that a scheme of compensation approved by the Registrar of Friendly Societies may be substituted for the provisions of the Acts.

The Workmen's Compensation (Silicosis) Act, 1920, empowers the Government to establish a fund, to which employers may be required to contribute, for the payment of compensation with respect to workmen who suffer death or disablement owing to fibroid phthisis or silicosis of the lung, or other diseases of the pulmonary or respiratory organs caused by exposure to silica or other dust. As a fund has not yet been established, the Act remains inoperative.

In terms of the Workmen's Compensation (Broken Hill) Act, 1920, which will remain in force until September, 1928, a fund has been established for the relief of metalliferous miners, who, having contracted pneumoconiosis or tuberculosis, have been incapacitated from further work in the Broken Hill mines. The fund is maintained by contributions—one-half by the Government of New South Wales and one-half by the mine owners.

The following statement shows particulars regarding compensation in respect of accidents paid under the Workmen's Compensation Acts during the five years, 1917 to 1921 :—

Year.	Accidents.				Compensation.			
	Death.	Disablement Compensated by—		Total.	Death.	Disablement Compensated by—		Total.
		Lump Sum.	Weekly Payment.			Lump Sum.	Weekly Payment.	
1917	46	98	4,689	4,833	£ 16,065	£ 7,172	£ 32,462	£ 55,699
1918	96	147	11,529	11,772	32,353	18,383	78,192	128,928
1919	115	194	11,793	12,102	41,203	25,381	91,646	158,233
1920	104	157	12,976	13,237	38,407	26,105	107,084	171,596
1921	120	167	16,079	16,366	39,762	28,417	196,378	264,557

Records relating to industrial diseases in 1921 show that the cases compensated under the Workmen's Compensation Acts of 1916 and 1920 were all due to lead poisoning—the total number being 150, viz., Broken Hill miners 145, painters 3, tinsmith 1, and compositor 1; eleven of the Broken Hill cases were fatal. The amount of compensation was £17,945 as compared with £14,896 in the previous year.

Under the Workmen's Compensation (Broken Hill) Act, an amount of £54,031 was paid as compensation in 1921 and of £56,336 in 1922. Compensation was payable in respect of 356 cases, as at 31st December, 1922, and the beneficiaries numbered 993, viz., 307 mine workers and 686 dependents including 397 children; at the end of the previous year the cases numbered 342 and the beneficiaries 991 including 411 children.

In addition to the general enactments of the State, specific enactments of the Commonwealth provide for compensation to men in a particular class of work, such as that of seamen, which is subject to special risks, and to workers in the service of the Commonwealth Government.

## WAGES.

The minimum rates of wages for nearly all classes of workers, male and female, adult and juvenile, are fixed by industrial tribunals exercising statutory authority.

Juvenile labour is protected also to some extent by a law passed in 1908 to prevent the threatened development in unorganised trades of a system under which young workers were being employed without remuneration; it provides that a minimum wage of not less than 4s. per week must be paid to factory workers, shop assistants, and others.

*The Living Wage.*

Early legislation empowering industrial tribunals to fix minimum wages, as incidental to the preservation of industrial peace, did not give any direction regarding the principles to be observed in the exercise of the function; but, in practice, the tribunals adopted the principle of basing their determinations on the living wage, which must be sufficient to secure to the unskilled worker a reasonable standard of living, as distinct from the secondary wage, which is remuneration for skill or other special qualifications.

Details regarding the development of the living wage principle since it was defined by Mr. Justice Higgins, President of the Commonwealth Court of Conciliation and Arbitration, in the well-known *Harvester* case in 1907, are published in the 1921 issue of the "Year Book," with particulars relating to the standard of living and the living wage determinations. In this issue only a brief description of the existing practice is inserted.

In the State jurisdiction the living wages for men and for women are fixed by the Board of Trade, after public inquiry regarding the average cost of living, and the declarations have statutory force as the basis of all industrial awards and agreements relating to wages. The Board's declarations were made annually until October, 1921. Subsequently the rates were reviewed at more frequent intervals, the validity of such action being upheld by judgment of the Full Court of Industrial Arbitration in June, 1922. In accordance with the most recent amendment of the Industrial Arbitration Act, passed in November, 1922, the Board may declare the living wages at intervals of not less than three months. An industrial award or agreement may not prescribe lower rates than those fixed by the Board, but the Court of Industrial Arbitration may refrain from making an award, or may cancel an award or agreement, if it is proved that serious unemployment in an industry may result from its operation; also the Court may exempt from the provisions of an award or agreement employees entitled to benefit under a profit-sharing or co-partnership scheme.

Prior to the establishment of the Board of Trade, the Court conducted an inquiry into the cost of living in Sydney, and in 1914 fixed a living wage for men, which it varied in the two following years.

For the purpose of the declarations, the living wage is defined as the standard wage which will do neither more nor less than enable a worker of the class to which the lowest wage would be awarded to maintain himself, his wife, and two children, in a house of three rooms and a kitchen, with food, plain and inexpensive, but quite sufficient in quantity and quality to maintain health and efficiency, and with an allowance for miscellaneous expenses.

The principle of a living wage was not applied to women's wages under the State industrial arbitration system until the Board of Trade conducted

its first inquiry into the cost of living in 1918. The standard adopted is the minimum wage which will cover the cost of living of the adult female worker of the poorest class, but having no other responsibility and living away from home in lodgings.

The variations in the living wages, as determined by the Court of Industrial Arbitration, and since 1918 by the Board of Trade, have been as follows; in 1919 and earlier years the declarations related to the metropolitan area only :—

Year.	Men.		Women.	
	Date of Declaration.	Living Wage.	Date of Declaration.	Living Wage.
		£ s. d.		£ s. d.
1914	16th February	2 8 0	...	...
1915	17th December	2 12 6	...	...
1916	18th August...	2 15 6	...	...
1918	5th September	3 0 0	17th December	1 10 0
1919	8th October...	3 17 0	23rd December	1 19 0
1920	8th October...	4 5 0	23rd December	2 3 0
1921	8th October...	4 2 0	22nd December	2 1 0
1922	12th May ...	3 18 0	9th October...	1 19 6
1923	10th April ...	3 19 0	10th April ...	2 0 0
1923	7th September	4 2 0	7th September	2 1 6

The declarations did not apply to employees in rural occupations, for whom the Board was required to conduct a separate inquiry, and was empowered to refrain from making a declaration if the conditions of the rural industries were not favourable. After inquiry in 1919 and 1920, the Board decided not to declare a living wage for rural workers but in October, 1921, the rate for men was fixed at £3 6s. per week, subject to deductions for board and residence. This declaration lapsed in October, 1922, and the Board resolved not to make a new declaration "for the present;" in the following month its power to prescribe living wages for rural industries was revoked.

The Commonwealth Court assesses a basic rate for each case in which minimum wages are to be determined. The standard adopted is the Harvester wage, 7s. per day in Melbourne in 1907, which was based apparently on the needs of a man, his wife, and three children; and the rate is adjusted to cover variations in the cost of living so as to assure to the lowest paid worker the same standard of comfort as that rate gave in 1907.

In view of the fact that awards are made for extended periods, much difficulty has been experienced in devising a satisfactory method of adjustment. For some years after the Harvester wage was determined the movement in the cost of living was slow, and wages were fixed by the Court after consideration of the cost of living at the time of the award, on the basis of the evidence given in the Harvester case. In July, 1913, the President decided to assess the basic wage, by applying to the Harvester rate the index number of the cost of food, groceries, and rent, as determined by the Commonwealth Statistician for the calendar year preceding the date when the award was made. Subsequently, as prices began to rise with increasing rapidity, it became the general practice to apply the index number for the twelve months immediately preceding the making of the award.

None of the foregoing methods, however, gave the desired result, and the Court decided that it was necessary in some cases to give awards a retrospective effect in order to relieve employees who had been receiving wages below a fair equivalent of the standard rate. Obviously, a system

which involved retrospective pay had many disadvantages, and in 1921 the Court adopted a new rule to provide for the periodical adjustment of rates of wages during the term of an award. Under the existing method, introduced in December, 1921, the adjustments are made quarterly on a basic rate which is ascertained by applying to the Harvester wage the index number of the cost of food, groceries, and rent for the preceding quarter, and adding 3s. per week to the result. The sum of 3s. per week, though an arbitrary figure, was chosen after deliberation as a fair addition to cover possible increases in the cost of living in the quarter succeeding each adjustment, and to set off past losses suffered by the workers during the period when wages had been lagging behind the rapidly rising prices.

*Living Wage in the other States.*

In Queensland the Industrial Arbitration Court has adopted a practice of fixing a minimum wage for industries of average prosperity, and of determining a basic wage with regard to the particular circumstances of any industry of greater or less than average prosperity. In South Australia the standard living wage is fixed by the Board of Industry. In Victoria and Tasmania the rates of wages in the various industries are fixed by wages boards by a process of collective bargaining between the employers and the employees in the industry concerned, and the prescribed rates for unskilled labour vary accordingly. In Western Australia the Arbitration Court adjudicates in cases of disputes only, and a basic rate is assessed for each case.

The rates shown in the following statement for Melbourne, Perth, and Hobart are those which may be regarded as fair average or basic rates for unskilled labour at the respective dates specified in the table. The quotations for the Commonwealth represent the rates which, in accordance with the practice of the Court, would have been used in determining rates of wages, if the Court had made awards for the capital cities as at the specified dates. The rate for July, 1914, was calculated by applying to the Harvester wage, 7s. per day in Melbourne in 1907, the index number of the cost of food, groceries, and rent in the capital cities during the preceding twelve months, and the rates in 1922 and 1923, by applying the index numbers for the March quarter and adding to the result the sum of 3s. per week.

Metropolitan Area.	Living Wage—Adult Males.		
	1914 (July).	1922 (May).	1923 (April).
	£ s. d.	£ s. d.	£ s. d.
Sydney ... ..	2 8 0	3 18 0	3 19 0
Melbourne ... ..	2 5 0	3 19 6	3 18 0
Brisbane ... ..	2 2 0	4 0 0	4 0 0
Adelaide ... ..	2 8 0	3 17 6	3 17 6
Perth ... ..	2 14 0	3 17 0	3 17 0
Hobart... ..	2 8 0	3 15 0	3 18 0
Commonwealth ... ..	2 13 6	3 17 6	4 0 6

*Secondary Wage.*

Having ascertained the basic rates of wages for unskilled labour, the assessment of the secondary wages is a matter to be considered separately

in connection with each occupation. It is the usual practice, under the State system, when varying wages on account of an increase or decrease in the cost of living, to preserve unaltered the recognised margin between the skilled and the unskilled workmen in an industry, and to vary all rates of wages by the amount by which the basic wage has been increased or reduced.

During the period of the war the State Court decided to depart from this practice, and new rules for the guidance of the industrial boards were contained in the "margin judgment" delivered in November, 1916. The boards were directed to increase all rates by the same amount as had been added to the living wage when making awards for industries appearing to benefit under war conditions. In other cases the rates above the living wage were to be adjusted by increases diminishing in amount so as to vanish at a point to be determined by each board.

The margin judgment was abrogated in November, 1918, the former rules being restored, and in subsequent awards the amounts by which the secondary wages had been reduced as the result of its operation were added to the rates.

An important principle observed by the Court in its wage determinations was the subject of a decision of the Full Court of Arbitration in 1922. The Court, constituted by a single judge, had granted an order, upon the application of the employers, reducing the rates payable to employees engaged in the Steelworks at Newcastle, on the ground that the profits of the industry were not sufficient to enable it to continue to pay the wages prescribed by current awards. The Court, however, reserved the right to make a retrospective award restoring the wages to the pre-existing standard if, up to a certain date prior to the expiration of the awards, the industry should be worked at a profit. Upon appeal, the Full Court rescinded the variation, the employers having refused to give an undertaking to abide by any subsequent award which the Court might deem to be reasonable for the recoupment of the reduced wages out of future profits. At a later date the rates were varied by consent of the parties, with the proviso that the wages lost by the reduction should be recouped out of the first profits earned.

During the war period the Commonwealth Court followed a general practice of increasing only the basic wage and leaving unchanged the secondary portion of the wage rates. It was recognised that this method was not strictly fair to the skilled workers, as it did not maintain the effective margins between the skilled and the unskilled when the cost of commodities was rising. After the war the Court, in the case of the Merchant Shipping Guild, in June, 1920, and of the Amalgamated Society of Engineers, in May, 1921, applied the index numbers relating to the purchasing power of money to the secondary as well as to the basic wage.

In subsequent judgments, *e.g.*, the Engine-drivers and Firemen's case in October, 1921, the Court indicated its decision not to adopt this method of assessing margins as a general practice, but to determine in each case an amount which it considers to be the fair value—as at the date of the award—of the skill required.

#### RATES OF WAGES.

The rates of wages for various occupations at intervals since 1901 are shown in the following statement; except where specified, the figures indicate the minimum amounts payable for a full week's work on the basis of the weekly,

daily, or hourly rates fixed by industrial awards and agreements, and for occupations not subject to industrial determinations, the ruling or predominant rates are stated. The table contains particulars of a few occupations only, but similar information relating to a large number of callings is published in the "Statistical Register" of New South Wales, 1920-21, in which the rates in each year from 1901 to 1913, inclusive, and in 1921, are stated; the following issue contains the rates in each year since 1913:—

Occupation.	1901.	1906.	1911.	1913.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
<b>Manufacturing—</b>											
Cabinetmaker .. ..	52 0	52 0	56 0	60 0	67 0	67 0	79 0	96 0	104 0	101 9	98 0
Boilermaker .. ..	60 0	60 0	66 0	66 0	78 0	78 0	85 6	85 6	110 6	107 6	103 6
Coppersmith .. ..	60 0	60 0	68 0	72 0	80 0	80 0	87 0	104 6	112 6	109 6	105 6
Fitter .....	60 0	60 0	64 0	70 0	78 0	78 0	85 6	102 6	110 6	107 6	103 6
„ electrical .. ..	60 0	60 0	66 0	72 0	82 0	82 0	82 0	90 0	111 6	108 6	104 6
Baker .. ..	52 6	52 6	56 0	60 0	70 0	70 0	70 0	70 0	102 6	100 6	96 6
Bootlicker .. ..	45 0	45 0	54 0	54 0	66 0	66 0	72 0	82 0	93 6	98 6	95 9
Tailor (ready-made) ..	50 0	50 0	55 0	60 0	69 0	67 0	67 6	75 0	92 0	102 6	96 6
Compositor (jobbing) ..	52 0	52 0	60 0	65 0	65 0	73 6	73 6	97 0	105 0	105 0	98 0
<b>Building—</b>											
Bricklayer .. ..	60 0	62 0	69 0	75 0	78 0	84 0	84 0	84 0	108 0	108 0	109 0
Carpenter .. ..	60 0	60 0	63 0	72 0	80 0	80 0	80 0	80 0	110 0	110 0	103 0
Painter .. ..	54 0	55 0	60 0	64 0	75 0	75 0	79 6	79 6	104 0	104 0	97 0
Plumber .. ..	60 0	60 0	66 0	72 0	72 0	80 0	80 0	80 0	110 0	110 0	103 0
<b>Mining—</b>											
Coalminer, per ton (best coal)	4 2	3 6	4 2	4 2	4 6	5 2½	5 2½	5 11½	6 11½	6 11½	6 11½
Coalwheeler .. ..	42 0	38 0	42 0	51 0	48 0 to 54 6	63 0 to 70 0	63 0 to 70 0	78 0 to 88 6	93 6 to 106 6	93 6 to 106 6	93 6 to 106 6
Silverminer .. ..	54 0	60 6	66 0	66 0	77 9	77 9	77 9	87 0	99 0	99 0	99 0
<b>Transport—</b>											
Railway loco-driver ..	66 0 to 90 0	66 0 to 90 0	66 0 to 90 0	72 0 to 96 0	72 0 to 96 0	72 0 to 96 0	74 6 to 96 0	84 0 to 108 0	109 0 to 133 0	106 0 to 130 0	102 0 to 126 0
Wharf-labourer per hour	1 0 to 1 3	1 1½ to 1 3	1 6	1 6	1 9	1 9	1 9	1 9	2 3	2 9	2 9
<b>Rural industries—</b>											
Shearer .. per 100 sheep	20 0	20 0	24 0	24 0	24 0	30 0	30 0	30 0	40 0	40 0	35 0
Station-hand, with keep ..	20 0	25 0	25 0	25 0	25 0	25 0	40 0	40 0	42 0	48 0	48 0
Farm-labourer, with keep	15 0 to 20 0	15 0 to 20 0	20 0 to 25 0	20 0 to 25 0	20 0 to 35 0	20 0 to 35 0	30 0 to 40 0	30 0 to 40 0	30 0 to 40 0	42 0	30 0 to 50 0
<b>Miscellaneous—</b>											
Pick and shovel man ..	42 0	42 0	48 0	51 0	56 0	60 0	64 0	85 6	91 6	94 6	86 6
Standard minimum wage ..	*	*	45 0	45 0	55 6	55 6	60 0	77 0	85 0	82 0	78 0

\* Standard not fixed.



As a result of the method of wage adjustment adopted by the industrial tribunals, the movement in the rates generally coincides with the rise or fall in the standard living wage. The declarations of the Board of Trade in the years 1918 to 1921 were made in the month of October and, in some cases, the rates in current awards were not adjusted until the following year, but as the parties concerned became more accustomed to the method of adjustment the variations were made more speedily. Prior to the determination of the Harvester rate in 1907 a standard wage was not fixed, and an inspection of the predominant rates in 1901 shows that wages as low as 30s. per week were paid for unskilled labour in some factories, but the average was probably about 35s. per week. The living wage, 78s. per week, in 1922, showed an increase of 43s. as compared with that rate, and a similar increase occurred in the wages of skilled artisans in the engineering and building trades for whom the predominant rate in 1901 was 60s. per week, as compared with a minimum award rate ranging from 103s. to 105s. in 1922. The weekly rates in the furniture and printing trades have risen from 52s. to 98s., and a greater increase has occurred in bootmakers' and tailors' wages, under the Federal arbitration system.

The wages of coalminers are based on contract rates which vary according to the conditions of the seams or places where the coal is mined. Prior to 1917, the rates depended upon the selling prices of coal, and the decrease in the hewing rates between 1901 and 1906 was due to reductions in price. Since the beginning of 1917, wages and hours in the industry have been regulated by special tribunals, and the hewing rates were increased by 15 per cent. in January, 1917, and in May, 1919, and by 17½ per cent. in September, 1920; on the same dates the wages for off-hand labour were raised also. In April, 1923, the special tribunal refused to grant an application by the colliery-owners for a reduction in wages. The rates shown in the table relate to the northern district where the bulk of the coal is produced.

The wages of railway engine-drivers are increased by 6s. per week on the completion of each of the first four years of service, the highest rates being paid to drivers of mail and passenger trains. The rates are generally higher than those fixed for most industrial occupations, but the increase since 1901 has been smaller than the increase in the other rates shown in the table. An hourly rate is prescribed for wharf-labouring, as intermittency is a constant factor owing to irregularity in the daily volume of shipping trade; extra rates are paid for handling special cargoes such as wheat, explosives, and frozen meat. Prior to 1911, the rate for interstate cargoes was lower than for overseas but, in later years, the same rate has been fixed for both classes of trade.

In the rural industries, contract rates for shearing have been fixed by the Commonwealth Court of Conciliation and Arbitration since 1907, except in the years 1920 and 1921, when they were the subject of an agreement between the pastoralists and the employees' union. In 1923, the Federal Court reduced the rate for shearing ordinary flock sheep from 40s. per 100 to 35s.; higher rates must be paid for shearing stud sheep. The wages of station hands were increased considerably in 1917 by the first award for that calling which was made by the Federal Court. The wages of farm labourers have not been fixed, except during the twelve months dating from October, 1921, when the rural living wage declaration of the Board of Trade was in force, the rate being 42s. per week for rural workers who were provided with board and lodging. The rates shown in the table for pick and shovel men relate to those engaged in the work of railway construction.

In order to show the extent to which changes in the rates for individual occupations have affected the average wage in various groups of industries, and in all industries combined, the following statement has been prepared in accordance with the method described on page 604 of the 1921 issue of the Year Book. The figures represent the average weekly rates of wages payable to adult males in each group of industries, and the weighted average for all groups combined in various years since 1901; in the shipping, pastoral, and domestic industries, where food and lodging are supplied, the value of such has been added to the rates:—

Group of Industries.	Average Weekly Rates of Wages.											
	1901.	1906.	1911.	1913.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	
1. Wood, Furniture, Sawmill, Timber Works, etc. ....	s. d. 48 4	s. d. 49 7	s. d. 55 6	s. d. 58 0	s. d. 65 1	s. d. 67 6	s. d. 69 6	s. d. 76 6	s. d. 101 1	s. d. 101 0	s. d. 95 0	
2. Engineering, Shipbuilding, Smelting, Metal Works, etc. ....	49 4	49 8	55 4	57 8	64 0	65 11	68 11	82 5	97 6	98 7	93 1	
3. Food, Drink, and Tobacco Manufacture and Distribution ....	44 11	45 3	51 4	56 0	62 3	64 1	66 1	79 3	94 0	95 2	91 5	
4. Clothing, Hats, Boots, Textiles, Rope, Cordage, etc. ....	44 5	44 5	51 7	54 0	60 2	61 6	63 3	76 11	91 6	91 10	89 3	
5. Books, Printing, Bookbinding, etc. ....	53 1	54 7	64 4	65 9	67 9	72 2	75 2	86 0	105 11	106 3	102 1	
6. Other Manufacturing ....	44 10	46 1	51 7	56 3	63 6	65 0	67 3	79 4	95 6	97 7	92 9	
7. Building ....	56 2	57 6	63 4	68 0	71 4	75 6	76 0	78 10	101 3	104 7	101 3	
8. Mining, Quarries, etc. ....	52 3	51 7	60 0	62 5	72 6	75 5	75 7	86 2	105 4	105 4	104 2	
9. Railway and Tramway Services ....	52 2	52 6	55 2	61 1	65 2	65 11	67 8	81 11	98 6	95 5	91 4	
10. Other Land Transport ....	41 8	41 8	44 4	51 4	59 4	59 7	62 1	78 3	93 0	92 0	88 1	
11. Shipping, Wharf Labour, etc. ....	38 4	38 8	44 6	48 9	58 4	60 1	63 5	76 1	89 10	100 5	98 6	
12. Pastoral, Agricultural, Rural, Horticultural, etc. ....	32 5	35 5	43 5	49 11	55 10	61 1	62 3	71 8	89 9	92 0	84 5	
13. Domestic, Hotels, etc. ....	37 11	39 1	44 3	45 5	53 3	56 9	57 2	71 5	88 10	89 0	83 7	
14. Miscellaneous ....	43 5	44 7	49 0	53 1	59 7	60 3	62 1	73 3	88 10	91 5	88 2	
All Industries ... ..	43 11	45 4	51 5	55 9	61 11	64 5	65 11	76 9	94 0	95 10	91 5	

The average rate of wages in all industries combined rose slowly until in 1918 it was 28 per cent. higher than in 1911; in the next three years it rose by 46 per cent., and reached the highest point in 1921, when it was 86·4 per cent. above the average of 1911; in the following year there was a decline of 4·4 per cent.

Prior to 1921 changes in the rates of wages did not alter materially the relative positions of the various groups, as indicated by the average rates. The highest averages were in the building, printing, and mining industries, though the first mentioned, previously at the head of the list, has dropped to third place; these groups are strongly organised trades, and include a large proportion of skilled artisans. The next in order were usually the railway and tramway services, engineering, woodworking, and other manufacturing trades; the lowest averages were in the shipping, rural, and domestic groups.

In 1921, however, the average in the shipping industry rose by 10s. 7d. per week, while all the other averages showed little or no increase, and some declined, and as a result the shipping group rose to fifth place. In the following year, when the average rate declined in all the groups, the decrease in the shipping group was smaller than in any other class, except mining, and it became fourth on the list. On the other hand the railway and tramway services group has receded in position from fourth in 1901 to ninth in 1922, as the average has risen by much less than any other average, viz., by 39s. 2d. during the period; it is probable that the earnings in these services are affected less by intermittency than in the other classes of employment. The

increase in average weekly rate, in the majority of the groups, ranged from 43s. 9d. to 46s. 6d., the classes with higher increases being shipping, 60s. 2d., pastoral and mining, 52s., printing, 49s., and "other manufacturing," 48s.

The foregoing tables relate to the nominal rates of wages, that is the actual amounts of money payable in return for labour; but in order to show the effective value of these amounts it is necessary to consider them in relation to the purchasing power of money. Food and rent are the only elements of expenditure of which satisfactory records as to variations in the purchasing power of money are available, and in the following statement the relation between the cost of these items and the average rates of wages is illustrated. For this purpose the average rates of wages have been reduced to index numbers, and have been divided by the index numbers of food and rent; the results indicate the variations in the effective wage:—

Year.	Average Nominal Wage per Week.		Index Number of Food and Rent Combined.	Index Number of Effective Wage.
	Amount.	Index Number.		
	s. d.			
1901	43 11	854	848	1007
1906	45 4	882	901	979
1911	51 5	1000	1000	1000
1913	55 9	1084	1112	975
1914	56 2	1092	1155	945
1915	57 7	1120	1261	888
1916	61 11	1204	1328	907
1917	64 5	1253	1356	924
1918	65 11	1282	1375	932
1919	76 9	1493	1502	994
1920	94 0	1828	1752	1043
1921	95 10	1864	1654	1127
1922	91 6	1782	1594	1118

In 1901 the effective wage was slightly higher, and in 1906 it was slightly lower, than in 1911; thereafter it declined steadily as living became dearer, until in 1915 it was 11 per cent. lower than in 1911. Subsequently wages were increased at a faster rate than the cost of food and rent, and the effective wage index number rose in each year, but it was not until 1920 that the nominal wage had the same purchasing power as in 1911; in 1921 it was 12·7 per cent., and in the following year 11·8 per cent. higher than in 1911.

The rates of wages, nominal and effective, as stated in the foregoing tables are based on the rates payable to employees under awards or agreements or on predominant rates for work without intermittency or overtime, and not on actual earnings, which are liable to fluctuate on account of the rise and fall in the volume of employment. Thus the census records show that there was a much larger proportion of unemployment in 1921 than in 1911; moreover conditions vary in different industries; in the building trade, for instance, there has been remarkable activity in recent years, and competent men have been receiving wages above the rates prescribed by awards, and have probably suffered less intermittency than in periods of normal trade, meanwhile some of the manufacturing industries have experienced unusual slackness.

## PRODUCTION OF LOCAL INDUSTRIES.

The value of production, as shown in this section, relates to the primary industries—Pastoral, Agricultural, Dairying and Farmyard, Mining, Forestry, Fisheries, and Trapping—and to the Manufacturing industries.

The values in regard to the primary industries—except mining—are stated as at the point or place of production, on the basis of the prices to the producers, which are therefore somewhat less than the wholesale prices in the Metropolitan market. No deduction has been made on account of the cost of items, such as seed, fertilisers, containers, fodder for animals, machinery, etc.

Some of the quotations are known to be understated; for instance, the values as estimated for agricultural and farmyard produce are deficient, because records are not available as to production (which in the aggregate must be large) on areas less than one acre in extent; the production from fisheries includes only the catches of licensed fishermen.

In regard to mineral production, it has been stated in the chapter "Mining Industry" that the assessment of the value presents great difficulty; in some cases the values, as recorded by the Department of Mines, are assessed at different stages of production, *e.g.*, the value quoted for the product of the silver-lead mines represents the net value as declared by the producers upon export, the bulk of the ores being sent out of the State for treatment.

The value of the manufacturing production is taken as the value at the factory of the manufactured goods less the cost of raw materials and fuel, but returns are not collected as to the production in small establishments employing less than four hands and not using machinery, nor from bake-houses nor butchers' smallgoods factories.

The aggregate value of production as stated is therefore not complete and should not be assumed to be the total fund available as the wages fund of the State or as remuneration for the agents of production in the form of wages, rent for land, and interest on capital invested. The values quoted for the specified industries do not include the value added by reason of transportation to market and distribution to the consumer, nor, in the case of exports, carriage to the point of shipment.

Moreover the earnings of many important activities, such as the building industry, of which records are not available, or from railway construction or commercial and other pursuits are not included. It will thus be seen that the amounts quoted have several shortcomings, nevertheless they are valuable as indicating the increase or decrease in production from year to year, and as being the principal means available of measuring the growth of the national income.

The following statement shows the estimated value of production of the specified industries, at the place of production, at intervals since 1871. After 1913 the values are quoted for the years ended 30th June, except those relating to the mining industry, which relate to the calendar years ended six months later.

The quotations for the mining industry and for the manufacturing industries have been amended since last issue. The figures showing the estimated value of mining production in each year from 1911 to 1919-20 inclusive have been reduced because it was found that the value as recorded by the Department of Mines included the value in respect of certain products of the manufacturing industries, *e.g.* coke produced at coke works (as distinct from the production in gas works), also the value added to minerals in the manufacture of lime and cement at limestone quarries, and in the treatment of ores at mines. The values shown for the last two years are those supplied by the mine

owners in returns collected under the Census Act; they represent the value at the mines of the minerals produced during each year. The figures relating to mining production are to be regarded as tentative, as an extended investigation is in progress in order to ensure that the estimates when determined finally will be as accurate as possible.

In regard to the manufacturing industries it had been the practice to exclude from the quotations the value of production in factories dealing with milk products, on the assumption that it was included in the returns of the dairying industry; recent investigation, however, has revealed that the latter figures include only the value of the milk treated, therefore the figure for the manufacturing industries in each year has been increased by the value added in the process of manufacture.

The values quoted in this table are not exact, especially in the earlier years, but may be considered to be the best estimates to be made from the data available.

Year.	Estimated Value of Production.								
	Primary Industries.					Mining.	Total, Primary Industries.	Manufacturing Industries.	Total, Primary and Manufacturing Industries.
	Rural Industries.								
	Pastoral.	Agri-cultural.	Dairying and Farmyard.	Total, Rural Industries.	Forests, Fisheries, and Trap ping.				
	£ 000	£ 000	£ 000	£ 000	£ 000	£ 000	£ 000	£ 000	£ 000
1871	7,609	2,220	1,110	10,939	324	1,626	12,889	2,490	15,379
1881	10,866	4,216	2,285	17,367	492	2,138	19,997	5,183	25,180
1891	14,725	3,615	2,735	21,075	758	6,434	28,267	7,799	36,066
1901	12,447	7,060	3,188	22,695	986	5,681	29,362	9,742	39,104
1911	19,434	9,749	6,534	35,717	2,213	7,392	45,322	19,432	64,754
1912	19,440	11,817	7,192	38,449	2,347	8,177	48,973	22,681	71,654
1913	20,738	12,378	7,063	40,179	2,634	8,712	51,535	23,764	75,299
1914-15	18,848	10,031	7,846	36,725	2,074	6,090	44,889	24,330	69,219
1915-16	21,576	20,362	7,649	49,587	2,603	7,478	59,668	25,235	84,903
1916-17	26,842	13,012	9,419	49,273	3,055	9,173	61,501	27,133	88,634
1917-18	28,435	13,685	10,635	52,755	3,737	10,493	66,985	29,500	96,485
1918-19	29,865	12,280	11,073	53,218	3,798	7,805	64,731	32,768	97,499
1919-20	33,972	13,582	11,793	59,347	7,760	9,656	76,757	39,314	116,071
1920-21	20,057	32,373	16,447	68,877	4,089	11,179	84,145	43,128	127,273
1921-22	23,657	20,261	12,914	56,832	3,628	11,245	71,705	46,746	118,451

The total value of production increased by £10,000,000 in each decade from 1871 to 1891; during the early nineties there was a decline from which the recovery was slow; in 1901, however, the value of production was £3,000,000 higher than in 1891. During the succeeding decennium the State entered upon a period of industrial expansion, and the value of production rose rapidly, the upward movement being interrupted only in 1914-15, when the combined effects of drought and war caused a serious decline, and in 1918-19, when there was a diminution in the output of the mines. In 1920-21 the total value was the highest on record, the amount, £127,273,000, being nearly twice the value ten years earlier. In the following season the general level of prices was much lower, and there was a decline of £8,643,000, or nearly 7 per cent. in the value of production, though the pastoral and manufacturing industries yielded a higher return, and mining production improved slightly.

In 1901 the value of production of the primary industries represented 75 per cent. of the total value, the rural production being equivalent to 58 per cent.; in 1911 the corresponding proportions were: primary industries 70 per cent., and rural 55 per cent., and in 1921-22, 61 per cent. and 48 per cent. respectively.

The value of rural production, especially in the agricultural industry, shows considerable fluctuation, for which the reasons are mainly seasonal.

Therefore it is convenient to trace the development of the industries by reviewing the returns on the basis of the annual average of triennial periods. Thus a comparison of the averages shows that the annual value of rural production rose slowly from £35,900,000 during the three seasons ending in 1911, to £38,500,000 in the three seasons ending in 1915, and thereafter it increased more rapidly until it reached the sum of £60,500,000 in the period ended June, 1921; in the last triennium of the period the annual average was £61,700,000.

In the mining industry the condition of the oversea market usually exerts the most powerful influence on the production of metals, which fluctuates accordingly. The demand for coal is more regular, and has increased steadily with the use of power machinery, so that coal is now one of the most important items of primary production. Restrictions on the export of metals and coal affected production in the early years of the war period. As hostilities continued, arrangements were made for marketing the products; and, high prices being obtainable, the value of mineral production reached a maximum in 1918. Subsequently the output of metals decreased owing to industrial strife, and to a decline in prices, but the coal trade experienced a period of increasing activity. With the restoration of industrial peace in the principal metal mines, production has improved during the last two years; but the market conditions have not been favourable, and it remains far below normal. The output of coal in 1921 was the largest on record. In the following year it was somewhat lower, owing mainly to depression in the iron and steel industries, in which large quantities of coal and coke are used. The return from mining represents usually between 8 per cent. and 10 per cent. of the total value of production.

The figures relating to the manufacturing industries disclose a steady advance from the beginning of the period under review, when it was less than £2,500,000, and only 16 per cent. of the total production. In 1901 the return was four times that amount, and it represented 25 per cent. of the total value of production; in 1911 the value of production was almost equal to the return from the pastoral industry, and it has exceeded it in each subsequent year. The relative importance of the manufacturing production has risen from 30 per cent. of the total production in 1911 to 39 per cent. in 1921-22.

The foregoing remarks relate to the actual value of production. In the following table the values per head of population are shown:—

Year.	Value of Production per Head.									
	Primary Industries.								Manufacturing Industries.	Total Primary and Manufacturing Industries.
	Rural Industries.				Forests, Fisheries, and Trapping.	Mining.	Total, Primary Industries.			
	Pastoral.	Agricultural.	Dairying and Farm-yard.	Total, Rural Industries.						
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1871	14 10 5	4 7 5	2 3 8	21 10 6	0 12 9	3 4 0	25 7 3	4 18 0	30 5 8	
1881	14 4 0	5 10 2	2 19 9	22 13 11	0 12 11	2 15 11	26 2 9	6 15 6	32 18 3	
1891	12 17 10	3 3 4	2 7 11	18 9 1	0 13 3	5 12 8	24 15 0	6 16 7	31 11 7	
1901	9 2 1	5 3 3	2 6 8	16 12 0	0 14 5	4 3 1	21 9 6	7 2 6	28 12 0	
1911	11 13 5	5 17 1	3 18 6	21 9 0	1 6 7	4 8 9	27 4 4	11 13 5	38 17 9	
1912	11 2 11	6 15 6	4 2 6	22 0 11	1 6 11	4 13 9	28 1 7	13 0 2	41 1 9	
1913	11 7 11	6 16 0	3 17 7	22 1 6	1 9 1	4 15 8	28 6 3	13 1 2	41 7 5	
1914-15	10 0 1	5 6 6	4 3 3	19 9 10	1 2 0	3 4 8	23 16 6	12 18 3	36 14 9	
1915-16	11 7 9	10 14 11	4 0 9	26 3 5	1 7 6	3 18 11	31 9 10	13 6 5	44 16 3	
1916-17	14 3 5	8 17 4	4 10 5	26 0 2	1 12 3	4 16 10	32 9 3	14 6 5	46 15 8	
1917-18	14 15 7	7 2 3	5 10 7	27 8 5	1 13 10	5 9 1	34 16 4	15 6 9	50 3 1	
1918-19	15 3 8	6 4 10	5 12 7	27 1 1	1 17 8	3 19 5	32 18 2	16 13 2	49 11 4	
1919-20	16 13 3	6 13 3	5 15 8	29 2 2	3 16 2	4 14 8	37 13 0	19 5 8	56 18 8	
1920-21	9 11 11	15 9 8	7 17 4	32 18 11	1 19 2	5 6 11	40 5 0	20 12 7	60 17 7	
1921-22	11 2 3	9 10 5	6 1	26 14 0	1 14 2	5 5 8	33 13 10	21 19 4	55 13 2	

The value of production per head from the pastoral industry was considerably greater when sheep-raising was the staple industry of the colony than in subsequent years when the population had entered into other activities.

The development in the manufacturing industries in 1871 and in 1881, as measured by the value of output per head of population, was not so great as the figures appear to indicate. The production included the output from several classes of machines used in connection with the agricultural industry and not, strictly speaking, manufactories; and most of the industries were subsidiary to agricultural and pastoral activities, viz., boiling-down works, fellmongering, woolwashing, grain-mills, chaffcutting, soap and candle works.

During the fourteen years which preceded the war there was a fairly steady increase in the value of production per head, and the return in 1913 amounted to £41 7s. 5d., which is £12 15s. 5d., or 45 per cent. greater than in 1901. The increase in the value of rural production was 33 per cent. greater than the increase in the population. In the mining industry the increase was 15 per cent. greater, and in the manufacturing 83 per cent. greater. The value per head declined by £4 12s. 8d., or 11 per cent. in the season 1914-15, then in the following year it rose above the former level, and increased in each year, with one exception, until it reached the highest figure on record, viz., £60 17s. 7d. in 1920-21.

In 1921-22 the per capita value of production from the rural industries was 21 per cent. higher than in 1913, the return per head from the pastoral industry was slightly lower, but the returns from agriculture and dairying were higher by 40 per cent. and 56 per cent. respectively. In the mining industry there was an increase of 10 per cent., and in the manufacturing an increase of 68 per cent.; the return per head from the primary industries was higher by 19 per cent., and from all industries by 34 per cent.

As compared with the previous season, the value per head was 9 per cent. lower in 1921-22. The pastoral industry yielded a value 16 per cent. higher, but agriculture declined by 39 per cent. and dairying by 23 per cent., consequently the return per head from the rural industries was lower by 19 per cent. The per capita return from mining was slightly lower, and primary production per head was lower by about 16 per cent.; the manufacturing industries showed an increase of 6 per cent.

#### *Relative Production.*

Formerly estimates of the volume of production from each of the principal industries were published in this chapter, but doubts were expressed as to whether the figures obtained gave a correct indication of the experience in the industry. Further research in 1923 showed that the wholesale price index numbers do not form a reliable measure of the variations of production prices in the manufacturing industries, the conclusions reached by using them as such being altogether at variance with recorded facts of production in 1921-22. Rather more than 50 per cent. of the value of production in manufactories, as represented by the value added in process of manufacture, is paid out as wages. (See pages 375 and 386 of this Year Book.) The index number of the average amount of wages paid per employee in each year has risen during the past three years by 20 per cent., while that of wholesale prices has declined by 22 per cent. Since the trend of the wholesale price index number is in such pronounced disagreement with that of this index of costs, it cannot be regarded as a trustworthy indication of the changes in production prices.

For these reasons results previously obtained for the volume of production in the manufacturing industry have been discarded. The figures obtained for the primary industries were upon the basis of actual prices and are quite

trustworthy as a measure of change in the volume of production. Since they are largely determined by seasonal influences, small interest attaches to consideration of them apart from similar figures for the manufacturing industries, and therefore they are not re-published. This general trend of production in the rural industries is apparent in the table which appears below.

It is not possible to quote the production per employee in the various industries, as, except in the manufacturing industries, the number of employees is not recorded accurately. The following statement shows, in regard to the principal commodities, the average annual production, absolute and per head of population, during the three-year periods, 1901-03 and 1920-22, in comparison with the three pre-war years, 1911-13, which were also years of high production :—

Product.		Average Annual Production (000 omitted).			Average Production Per Head.		
		1901-03.	1911-13.	1920-22.	1901-03.	1911-13.	1920-22.
Wool, Greasy ... ..	lb.	251,497	352,112	274,097	181·2	202·0	131·4
Tallow ... ..	cwt.	312	698	590	·2	·4	·3
Meat, Frozen (Exported)—							
Beef ... ..	lb.	5,963	11,120	9,772	4·3	6·4	4·7
Mutton ... ..	„	27,427	63,828	38,304	19·7	36·6	18·4
Leather ... ..	„	14,378*	13,373	18,403	10·4	7·7	8·8
Butter ... ..	„	35,912	79,198	82,692	25·9	45·4	39·6
Cheese ... ..	„	4,245	5,845	6,845	3·1	3·4	4·7
Bacon and Ham ... ..	„	9,314	15,940	17,783	6·7	9·1	8·5
Wheat ... ..	bush	14,576	31,865	34,260	10·5	18·3	16·4
Maize ... ..	„	4,577	4,691	4,068	3·3	2·7	2·0
Potatoes ... ..	cwt.	844	1,824	1,141	·6	1·0	·5
Hay ... ..	„	10,741	18,612	19,896	7·7	10·7	9·5
Coal ... ..	ton.	6,088	9,664	10,564	4·4	5·5	5·1
Coke ... ..	cwt.	2,775	9,217	16,351	2·0	5·3	7·8
Gold ... ..	oz.	233	200	42	·2	·1	·0
Silver ... ..	„	872	2,117	957	·6	1·2	·5
Silver-lead-ore, etc. ...	cwt.	7,647	7,167	1,737	5·5	4·1	·8
Zinc ... ..	„	151	10,290	3,430	·1	5·9	1·6
Timber, Sawn ... ..	sup. ft.	127,509*	169,078	159,102	91·8	97·0	76·3
Fish, Fresh ... ..	lb.	14,532	15,499	21,562	10·5	8·9	10·3
Rabbit Skins (Exported)	„	756*	5,305	6,238	·5	3·0	3·0
Iron, Pig ... ..	cwt.	150	771	1,540	·1	·4	·7
Portland Cement ... ..	„	372	2,374	2,768	·3	1·4	1·3
Beer and Stout ... ..	gal.	14,420	21,665	27,000	10·4	12·4	12·9
Tobacco ... ..	lb.	3,668	6,370	11,991	2·6	3·7	5·7
Biscuits ... ..	„	10,122*	24,175	40,618	7·3	13·9	19·5
Boots and Shoes ... ..	pairs	3,016	3,752	4,888	2·2	2·2	2·3
Bricks ... ..	No.	180,887	366,985	330,316	130·4	210·5	158·4
Candles ... ..	lb.	3,364	5,511	4,660	2·4	3·2	2·2
Gas ... ..	1,000 cub. ft.	2,311	4,878	9,541	1·7	2·8	4·6
Jam ... ..	lb.	19,498*	27,767	34,017	14·0	15·9	16·3
Soap ... ..	„	22,748	31,670	36,752	16·4	18·2	17·6
Sugar, Refined ... ..	cwt.	1,190	1,834	2,252	·9	1·1	1·1
Meat, Preserved ... ..	lb.	15,675	25,501	9,090	11·3	14·6	4·4
Tweed and Cloth ... ..	yd.	516	1,170	2,406	·4	·7	1·2

\* Estimated.

The statement shows in regard to 35 staple commodities that the quantity produced per head between 1911-13 and 1920-22 increased in 12, decreased in 21 cases, and in 2 cases the average was the same in both periods. Amongst those which decreased were the important commodities—wool, meat, butter, wheat, coal, silver-lead, and timber.



## INDUSTRIAL HISTORY OF NEW SOUTH WALES.

An account of the Industrial History of the State up to 1899 appears in the "Wealth and Progress of New South Wales, 1897-8," and is contained on a broader basis in the "Official Year Book, 1921." The following account of recent developments brings the matter up to date of publication.

1921-22.

As the year 1920 was the culminating point of the trade boom, which had assumed new vigour after the close of the war, 1921 was the fateful year in which the inevitable process of deflation began. In older countries, where the economic situation was more complex, the transition was sudden, and marked by serious disturbances in industry and commerce; but in New South Wales a policy of gradual deflation was pursued, and readjustments to meet the new conditions proceeded without grave disorders. Although conditions of employment became bad and remained bad, the shortage of work was not generally acute for any lengthy period. At the census in April, 1921, when the position was at its worst, the unemployed in the State numbered 61,743, equal to 7 per cent. of the total breadwinners, but of these only one-half were out of work through scarcity of employment. Financial losses in some cases were severe, but serious disorders were avoided, and there was no appreciable increase in the number or magnitude of bankruptcies—convincing proof of an efficient commercial and banking organisation, and of the financial strength of the community. On the whole, production increased in volume, and, as this increase more than counteracted the decline in prices, the value of production was greater in 1920-21 than in any previous year. The propitious seasons which followed the breaking of the drought in June, 1920, stimulated production, and helped to improve the difficult situation which was arising out of the decay of the unreal prosperity consequent upon the general fall in prices.

The decline first affected the State through a fall in the prices realised for pastoral products and metals, of which New South Wales is a seller, and for manufactured goods, of which it is a buyer. The smaller and slower realisations on all primary products, except wheat, caused a reduction in the national income during 1921, while, at the same time, the knowledge that the level of prices was at last falling produced a spirit of caution among the buying public. Although exports declined heavily, imports, in fulfilment of long-standing orders, grew to unprecedented heights in 1920-21. Commercial houses were faced with the troublesome problem of realising on large stocks of high-priced goods on falling markets in order to meet extraordinary commitments overseas, while the spending power of the public was weakening.

As the violent developments overseas dominated the local situation, the whole industrial organisation of the State felt the influence of price variations. Prices fell steadily for two years, and by July, 1922, had reached a point approximately 30 per cent. below the highest point reached in 1920. The volume of trade, as shown by monetary transactions, began to shrink. Bank advances had reached their maximum in March quarter, 1921, and deposits in the following quarter; thereafter both receded gradually. Deposits reached their lowest point by December, 1921, and advances six months later. A decline was apparent also in the business of the clearing-house, the total of 1921 being more than 7 per cent. less than that of 1920, while in the early months of 1922 there was a further decline. The spirit of caution in spending had its counterpart in saving, and a new growth

of deposits occurred in the savings banks. These increased by £7,460,000 in 1920-21—nearly double the increase of any preceding year. The diminution in earning-power was exhibited in the smaller earnings of public companies, some of which arranged to return portion of their capital to shareholders.

As the result of recommendations made by the special tribunal set up in February, 1921, to consider applications for a reduction in hours of work, a 44-hour working week was proclaimed in respect of many of the important industries regulated by awards of the State courts. This matter, the question of unemployment, and of reduction in the costs of production, became topics of much discussion. A joint economic conference of representative organisations of employers and employees assembled in Sydney in 1922 to consider the problems of the day, but failed to agree on general principles, and disbanded without formulating concrete proposals for the betterment of conditions. The price of coal and its cost of production were the subject of a subsequent conference, but agreement was not reached.

In October, 1921, the Board of Trade reconsidered the living wage, and declared in favour of a reduction from £4 5s. to £4 2s. per week, but the determination was not put into effect immediately, and the average effective wage of 1921 was 12·7 per cent. above that of 1911. In May, 1922, after the change of Government, the Board gave the matter further consideration, and declared another reduction to £3 18s. per week. During all these readjustments the industrial situation remained calm, and in 1921 strikes were in extent far below the average of the previous eight years. A number of industries, however, principally the metal and metalliferous mining enterprises, were dislocated by a fresh cause—the absence of profitable markets—and a number of establishments and mines suspended operations pending an improvement in markets or a reduction in costs of production.

With the advent of favourable seasons in June, 1920, the outlook for primary industries improved. The harvests of 1920-21 and of 1921-22 were unusually large, especially the former, and high prices were realised for wheat; the market for butter improved after a severe decline toward the end of 1921, and production increased to over 100,000,000 lb. in 1921-22; the sheep flocks recovered rapidly from the effects of the drought of 1920, and prices rose as the demand increased, so that the clip of 1921 was practically disposed of by the end of July, 1922, at very satisfactory prices. The trials of the readjustment period found organisations of producers, brought into being largely by the problems of recent years, ready to take combined action in their own interests, and the disturbed state of markets led to a continuance of the war-time expedient of "pooling" produce for market. Although wool reverted to a free market in 1921, control of the realisation of surplus wool from previous years was handed over to a company specially formed for the purpose. The wheat-growers by ballot emphatically favoured a "voluntary pool" in connection with the harvest of 1921-22, and more than half of that harvest was entrusted to the new organisation. Butter was controlled by producers on co-operative principles, and a "fruit pool" was formed by the Commonwealth Government to handle fruit for canning. By these means primary producers were able to exercise more control in the marketing of their products, and to obtain better prices.

The general decline of prices, wages, and employment had a marked effect on the housing problem. Owing to high costs, building activity decreased during 1921, although housing needs had not been fully met; but the increase in rents, the fall in wages, and the slackness of employment,

led to such economy in housing accommodation that, towards the middle of 1922, the effective demand for houses became less intense and notices of houses to let, which had been rare for some years, became familiar again in the columns of the press, but the rents required generally exceeded 25s. per week. At the same time reduced costs led to an expansion of building operations.

Although local rates of interest remained unchanged at a high level, monetary conditions oversea improved. Public loans were negotiated on improved terms in London. A loan of £5,000,000 issued at 95, bearing interest at the rate of  $4\frac{1}{2}$  per cent. per annum, was raised by the Government of New South Wales in 1922. The extent of the improvement is apparent from the rise in the price of Consols, which had been quoted at 44 and rose to 58½ in May, 1923, while New South Wales 3 per cent. stocks recovered from 58 to 82. The recovery of trade was further facilitated by a marked improvement in the exchange between London and New York.

Following upon the political crisis of December, 1921, general elections were held in March, 1922, and a change of Government was effected. The policy of the new administration included the abolition of all restrictions on trade and industry, reintroduction of a 48 hour working week, and land settlement.

#### 1922-1923.

The depression which followed the post-war boom had passed its worst phase by the middle of 1922—nearly two years after the fall in values had commenced. More stability appeared in foreign markets which influenced local prices through imports and exports alike. An improvement in primary production in 1921-22 increased the effective purchasing power of the State and it was further strengthened as time passed, by the rising value of wool and the increasing production of butter.

In the latter part of 1922 the level of commodity prices in New South Wales assumed temporary stability at about 60 per cent. above the level of 1914, and a further rise commenced early in 1923. Trade rapidly adjusted itself to the new basis, wages and profits became steady with a tendency to rise, the velocity of exchange increased, and employment improved, but a cautious spirit continued in investment.

A further improvement in the rates of exchange with America, toward the end of 1922, facilitated trade, but the continental exchanges, notably with ex-enemy countries, and with France and Belgium receded further from parity. Trade with the principal ex-enemy countries was resumed on 1st August, 1922, and elaborate legislative provision was made to prevent the sale of imported goods produced under the advantage of depreciated exchanges at prices ruinous to the competition of local manufacturers. During 1922-23 the value of machinery and textiles imported amounted to nearly £16,500,000, but despite the increased value of wool exported the value of exports declined, owing to the smallness of the wheat crop; and during the year there was an excess of imports over exports amounting to more than £12,000,000. The revival in oversea trade, which was already occurring as exchanges improved, was stimulated further by the reduction of freights on ocean cargoes. This revival was evident in the steady increase in shipping after the war until, in 1922, the tonnage of vessels entering the ports of the State was equal to that of 1913, when it had reached a maximum.

It is probable that the return of prosperity deferred the fall in the rates of interest which would have accompanied a decline in profits. As it was, money accumulated rapidly in trading-banks at fixed deposit and Government stocks and other stable investments came into demand to such an extent that within twelve months their prices on the Stock Exchange rose by 7 per

cent. The strength of the demand for well-established investments was indicated early in 1923 when a  $5\frac{1}{2}$  per cent. loan of £1,000,000 at par issued by the Rural Bank attracted applications for four times the amount required. At the same time a Commonwealth loan of £5,000,000 at 5 per cent. for ten years, issued at 96 in London, was fully subscribed.

The tendency to revert to normal conditions in trade and finance was accompanied by a decrease in speculative enterprise. In 1922 the volume of company promotion was not greater than before the war. However, building operations in the Metropolis, which had slackened owing to high costs, increased very rapidly during the latter part of 1922 and the total value of buildings completed during the year (£8,755,000) was greater than in any previous year. The amount of building in other parts of the State was comparatively small. In regard to public works, the construction of the city and suburban electric railway was re-commenced in February, 1922, after an interval of  $4\frac{1}{2}$  years, and Parliamentary sanction was given in November to the erection of the North Shore bridge across Sydney Harbour, at an estimated cost of £5,750,000.

Despite the building activity in the metropolitan area, the house shortage remained and rents continued to rise throughout 1922. The continued decline in prices, however, was such that the cost of living decreased, and the reduction of the living wage to £3 18s. became operative in the latter part of 1922, but no actual reduction ensued in the standard of living from this cause as the effective wage-rate remained nearly 12 per cent. above that of 1911. However, it was reflected in the deposits in Savings Banks of which the total did not increase after June, 1922, while the average amount per depositor declined slightly. In May, 1923, in consequence of a slight rise in prices the living wage was increased by 1s. per week to £3 19s. These adjustments of wages proceeded concurrently with reversion to the 48-hour working-week in most industries where hours had been reduced in 1921, but comparatively little industrial dislocation resulted.

Important innovations were made in the policy of the Government in 1922. A far-reaching immigration scheme was approved between State and Commonwealth involving co-operation with the British Government in providing financial assistance necessary to the carrying out of a vigorous policy of immigration and Empire settlement. A new land policy was prepared to stimulate closer settlement through encouraging subdivision of large alienated holdings and promoting a spirit of self-help and co-operation in rural finance for the purpose of assisting bona-fide land seekers and established settlers. At a Premiers' conference in 1923 agreement was made with a view to delimiting Commonwealth spheres of taxation and arbitration and eliminating duplication in governmental activities.

## AGRICULTURE.

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THE land of New South Wales, comprising an area of nearly two hundred million acres, is practically all under occupation. It embraces so great a variety of soils and climate that almost any kind of crop, whether specially the produce of temperate, and even cold, climates, or of sub-tropical regions, may be grown. The nature of the soil varies greatly in different parts of the country; but, except in the inaccessible or rugged portions of the mountain chains, and the more arid regions of the north-western districts, the soil is almost everywhere susceptible of cultivation. The variety of climate experienced extending through 8 degrees of latitude—from 29 degrees to 37 degrees south—causes a corresponding variety in the kinds of produce which may be grown successfully. The area absolutely unfit for occupation of any sort has been estimated roughly at less than 5,000,000 acres. Success in agricultural operations in New South Wales is, however, altogether independent of the mere fitness of the soil for cultivation. Up to the present, experience has shown that an irregular rainfall and a want of uniformity in the seasons, which are the chief characteristics of the climate of a large part of the interior, are the greatest drawbacks to the advance of agriculture, but research and experiment are extending steadily the areas on which agricultural pursuits may be followed with success.

The land adaptable to cultivation, under existing conditions, is found mainly in the Eastern and Central Divisions, which cover three-fifths of the area of the State; but, owing to the confined nature of their basins, the portions of the valleys of the Coastal Rivers adapted for agriculture are limited, and the region is given over principally to dairy-farming. Large tracts of the Tablelands are hilly and rock-strewn, and are used mainly for sheep and cattle raising. In the northern hinterland there is very little agriculture, and sheep-raising is still the principal industry, although that division has a plentiful rainfall and large areas adaptable to wheat-culture. It is, therefore, to the central and southern slopes and plains of the interior that agriculture at present is confined principally, and especially to the extensive and well-named Riverina district. Even here, however, only a small portion of the land has been cultivated, and great expansion is still possible.

The meagre rainfall and the absence of irrigation facilities in the Western Division, which includes eighty million acres, or two-fifths of the surface of the State, have hitherto rendered this great area practically unfit for cultivation, but it is eminently suited for raising merino sheep.

The agricultural potentialities of the more easterly areas have not yet been fully developed, but taking a long view, wheat-growing is steadily intensifying in the east, while mixed farming, that is to say wheat-growing, in conjunction with sheep-raising, is extending westward. Moreover, factors such as the evolution of improved plant types, the introduction of dry-farming and other improved methods of land tillage, the extension of irrigation facilities, and the development of the railway system, are expanding the area adaptable to successful agriculture and encouraging the cultivation of new areas.

## AREA OF AGRICULTURAL LANDS.

A brief historical note on the growth of agriculture was published on page 709 of the Official Year-book, 1921, and a comparison of the areas cultivated in divisions of the State since 1905 appeared on page 712.

Rapid extension in the area cropped occurred toward the end of the last century, and yet more rapid expansion between 1910 and 1916. The decline in the three years 1918-1920 was due to the occurrence of bad seasons and to the uncertain outlook which faced the growing of wheat for export. The cultivation of maize and oats has also fallen off in recent years. Other crops are of small extent.

The progress of cultivation since 1891, in quinquennial periods, is shown in the following table :—

Years ended June—	Average Area under—		Acres per Inhabitant under—	
	Cultivation, including Grasses.	Crops.	Cultivation.	Crops.
	acres.	acres.		
1891-95	1,398,199	1,048,554	1·18	0·88
1896-00	2,252,649	1,894,857	1·73	1·46
1901-05	2,942,506	2,436,765	2·10	1·74
1906-10	3,575,873	2,824,253	2·34	1·84
1911-15	5,187,850	4,025,165	2·93	2·27
1916-20	6,011,049	4,615,913	3·09	2·37
1921	6,280,517	4,464,342	3·01	2·14
1922	6,451,363	4,445,848	3·03	2·09

The area of land under sown grasses (2,005,515 acres) consists principally of lands on the coastal districts, cleared, and sometimes rudely cultivated and sown with grasses for the maintenance of dairy stock.

The season 1919-20 was particularly unfavourable to agriculturists, and the decline indicated since 1915-16 was due probably to seasonal and other special factors rather than to permanent causes. The area sown with wheat in the season 1922-23 was, approximately, 220,000 acres greater than in 1921-22, and it may be surmised that the total area under crop in 1922-23 reflected this increase.

Particulars were obtained in 1922 of the area of alienated land (exclusive of that required to depasture working horses and milking cows necessary on the farm) which, in the opinion of the occupier, was suitable for cultivation after the removal of standing timber. The area so ascertained was 17,905,000 acres, or 29 per cent. of the area of alienated land occupied for agricultural and pastoral purposes. A certain proportion of the lands included in this area are situated in districts where the rainfall has not yet been found adequate for agricultural production.

The following table shows the distribution of agricultural lands during the season 1921-22 :—

Division.	Total Area of Division.	Area of Alienated and Crown Lands under—			Area of Alienated Land Occupied in Holdings of 1 acre and over—		
		Occupation in Holdings of 1 acre and over.	Crops.	Sown Grasses.	Suitable for Cultivation.	Under Crops, 1921-22.	Proportion of Suitable Area Cultivated.
	000 acres.	000 acres.	000 acres.	000 acres.	000 acres.	000 acres.	per cent.
Coastal—							
North Coast .. ..	5,409	3,808	88	1,428	406	87	21.43
Hunter and Manning ..	10,391	6,323	97	260	384	97	25.26
Cumberland .. ..	1,071	368	33	2	119	33	27.73
South Coast .. ..	5,484	2,414	44	172	139	44	25.23
Total .. ..	22,355	12,913	262	1,862	1,098	261	23.77
Tableland —							
Northern .. ..	8,928	7,243	73	16	332	71	21.39
Central .. ..	8,939	6,137	271	9	969	270	27.86
Southern .. ..	7,914	6,520	59	1	361	57	15.79
Total .. ..	25,831	19,900	403	26	1,662	398	23.95
Western Slopes—							
North .. ..	9,813	8,773	407	6	1,542	396	25.68
Central .. ..	6,253	5,153	635	3	1,963	660	33.32
South .. ..	8,186	6,842	710	104	2,109	601	32.76
Total .. ..	24,252	20,768	1,802	113	5,614	1,747	31.12
Central Plains—							
North .. ..	10,031	8,161	36	..	452	29	6.42
Central .. ..	16,030	15,098	518	2	3,168	462	14.58
Total .. ..	26,061	23,259	554	2	3,620	491	13.56
Riverina .. ..	19,767	18,272	1,417	2	5,824	1,312	22.53
Western .. ..	80,369	77,279	8	1	87	5	5.75
All Divisions ..	198,635	172,391	4,446	2,006	17,905*	4,214	23.54

\* Total area of alienated land in holdings of 1 acre and over used for pastoral and agricultural purposes 62,118,000 acres.

#### NUMBER OF AGRICULTURAL HOLDINGS.

A consideration of the number of holdings on which land was cultivated, and the principal crop on each, affords interesting information as to the popularity of the various crops. The number of farms on which wheat is sown, so far from exhibiting any permanent increase, declined after 1915-16, owing to bad seasons, but the area devoted to this crop has practically doubled

in the past twenty years. Several minor industries have been languishing over lengthy periods, and less attention is being paid to maize, potatoes, sugar-cane, and grape-growing than formerly. The cultivation of oats has extended, citrus fruit-growing is gaining rapidly in importance, and the occurrence of good seasons and high prices has given some stimulus to tobacco-growing.

Relatively to the area cultivated, the number of holdings on which maize is grown is greatly in excess of that of wheat, owing to the fact that many dairy-farmers crop small areas for use on the farms; whereas portion of the area under wheat—varying from one-fourth to one-seventh—is cultivated on the “shares” system, by which two or more growers cultivate one holding.

The number of cultivated holdings, and the principal crops cultivated on them at intervals since 1900-01 are shown below.

Principal Crop.	Number of Cultivated Holdings.				
	1900-01.	1905-06.	1915-16.	1920-21.	1921-22.
Wheat ... ..	20,149	19,049	22,453	17,790	18,216
Maize ... ..	17,569	17,475	14,869	15,272	15,969
Barley ... ..	2,246	1,755	2,538	1,851	1,461
Oats ... ..	11,547	10,740	13,723	15,870	14,829
Potatoes ... ..	9,521	8,552	4,643	4,566	4,356
Tobacco ... ..	31	98	97	129	171
Sugar-cane ... ..	1,214	1,113	694	667	723
Grapes ... ..	1,832	1,530	1,292	1,388	1,341
Fruit—Citrus ... ..	1,905	2,385	5,787	6,071	6,248
Other ... ..	8,064	6,846	8,760	8,793	8,506
Market Gardens ... ..	2,266	2,842	3,301	2,546	2,180
Total Cultivated Holdings*	45,828	46,349	50,632	48,664	49,830

\* Holdings on which more than one crop was grown are included once only.

Maize and oats crops for market are grown on only a small proportion of the holdings where they are cultivated. Wheat was grown on approximately 18,000 farms in 1922-23.

Although the number of cultivated holdings has not increased appreciably since 1901, the agricultural industry has grown very much, as may be seen from the comparison on page 484. The total number of holdings of one acre and upwards used for agricultural and pastoral purposes in 1921-22 was 79,218, and on 49,830 holdings areas of varying sizes were cultivated. Only 11,468 holdings were used exclusively for agricultural purposes, and 1,345 were irrigated. In addition, however, 18,758 combined agricultural with pastoral pursuits, 5,214 combined agriculture with dairying, 1,818 combined all three pursuits, and a limited amount of cultivation of a non-commercial



character was conducted in connection with other activities. There were, in all, 29,388 holdings without any cultivated land, and of these 25,438 were used for grazing purposes.

AGRICULTURAL PRODUCTION.

The area and production of the principal crops of New South Wales are shown below. The year ended 30th June, 1916, in which the area cultivated was greater than in any other season, has been included for comparative purposes.

Crop.	1915-16.	1918-19.	1919-20.	1920-21.	1921-22.
Wheat (grain)—					
Area ... .. acres	4,188,865	2,409,669	1,474,174	3,127,377	3,194,949
Total yield ... .. bush.	66,764,910	18,325,000	4,388,022	55,325,000	42,767,000
Average yield p.a. ... bush.	15.9	7.6	3.0	17.8	13.4
Maize—					
Area ... .. acres	154,130	114,582	136,509	144,105	146,687
Total yield ... .. bush.	3,773,600	2,091,921	4,052,025	4,176,000	3,976,300
Average yield p.a. ... bush.	24.5	18.3	29.7	29.0	27.1
Oats (grain)—					
Area ... .. acres	58,636	86,474	76,117	77,709	69,795
Total yield ... .. bush.	1,345,698	1,273,752	586,758	1,642,700	1,169,900
Average yield p.a. ... bush.	23.0	14.7	7.7	21.1	16.8
Hay—					
Area ... .. acres	1,108,919	814,960	938,400	854,263	750,928
Total yield ... .. tons	1,573,938	754,030	580,586	1,374,656	1,029,124
Average yield p.a. ... tons	1.42	.92	.62	1.61	1.37
Green Crops—					
Area ... .. acres	162,945	331,129	1,007,506	112,003	128,965
Potatoes—					
Area ... .. acres	19,589	20,879	20,043	27,673	29,494
Total yield ... .. tons	44,445	30,356	49,986	63,256	57,835
Average yield p.a. ... tons	2.27	1.45	2.49	2.29	1.96
Sugar-cane—					
Area cut ... .. acres	6,030	4,566	4,827	5,519	5,400
Total yield ... .. tons	157,748	105,234	91,321	131,313	149,474
Average yield p.a. ... tons	26.16	23.05	18.92	23.79	27.68
Orchards, etc.—					
Area ... .. acres	63,823	64,185	82,388	87,342	89,194
Market Gardens—					
Area ... .. acres	10,967	10,043	9,872	9,915	8,244
Total yield ... .. £	400,860	441,070	511,311	556,887	623,243
Average yield p.a. ... £	36.6	43.9	51.2	56.2	75.6
Minor Crops—					
Area ... .. acres	26,843	37,115	23,741	21,203	24,114
Total Area* ... acres	5,900,747	3,893,602	3,773,577	4,467,109	4,447,770

\* Including area double-cropped.

It will be observed that wheat is the only crop extensively grown. The larger part of the area devoted to hay is also under wheat, but considerable proportions are used for the production of oaten and lucerne hay.†

In addition to the area shown as cultivated there were at 30th June, 1922, 1,963,478 acres under sown grasses; 43,067,700 acres of Crown Lands were ringbarked, partly cleared, and under native grasses; and 3,006,921 acres were ready for cultivation on alienated holdings, including 2,465,986 acres which had been cropped previously, 168,558 acres of new land cleared and prepared for ploughing, and 372,377 acres in fallow.

† See page 518.

*Value of Agricultural Production.*

The estimated value of the agricultural production of the State during the last four seasons in comparison with 1915-16, the year of the greatest wheat harvest, and the proportionate value of each crop to the total value, are shown in the following table, the values being based on prices realised on the farm :—

Crop.	Value.					Proportion per cent.				
	1915-16.	1918-19.	1919-20.	1920-21.	1921-22.	1915-16.	1918-19.	1919-20.	1920-21.	1921-22.
	£	£	£	£	£					
Wheat .. ..	13,352,980	3,588,650	2,104,020	20,164,060	9,977,550	65·6	29·2	16·2	62·3	49·2
Maize .. ..	723,270	580,380	1,502,900	974,260	894,670	3·6	4·7	11·1	3·0	4·4
Barley .. ..	20,630	20,890	12,160	23,270	16,350	0·1	0·2	0·1	0·1	0·1
Oats .. ..	173,820	265,350	168,700	241,480	193,820	0·9	2·2	1·2	0·7	1·0
Hay and Straw ..	3,897,910	4,356,770	5,468,005	7,494,209	5,531,750	19·1	35·5	40·3	23·2	27·3
Green Food ..	367,820	477,400	1,002,770	437,886	477,188	1·8	3·9	7·4	1·3	2·4
Potatoes ..	294,390	295,010	642,920	309,910	243,140	1·4	2·4	4·7	1·0	1·2
Sugar-cane ..	205,070	167,060	152,452	287,250	325,110	1·0	1·4	1·1	0·9	1·6
Grapes .. ..	98,400	113,920	111,180	143,020	125,620	0·5	0·9	0·9	0·4	0·6
Wine and Brandy ..	47,840	85,700	148,900	127,420	113,510	0·2	0·7	1·1	0·4	0·6
Fruit—Citrus ..	252,170	745,070	534,530	477,580	530,380	1·2	6·0	3·9	1·5	2·6
Other .. ..	243,210	577,690	555,058	577,290	812,210	1·2	4·7	4·1	1·8	4·0
Market-gardens..	400,860	441,060	511,310	556,587	623,243	2·0	3·6	3·7	1·7	3·1
Other Crops ..	283,990	564,940	577,185	558,028	390,229	1·4	4·6	4·2	1·7	1·9
Total.. ..	20,362,360	12,280,190	13,582,090	32,372,550	20,269,770	100	100	100	100	100

At prices prevailing in Sydney markets, the value of agricultural production in 1921-22 was £26,667,000.

The agricultural wealth of New South Wales at present depends mainly on the return from wheat crops, including hay and straw, the value of these crops in 1921-22 being £15,509,300, or nearly 77 per cent. of the total. Maize is next in importance, but the returns from other crops are comparatively small.

Prior to 1920-21 the value of agricultural production reached its highest point in 1915-16, principally by reason of the largely augmented wheat yield of that year, which was supplemented by the occurrence of unusually high prices in the early part of the season as a consequence of the shortage in production caused by the drought in the previous year. In the years which followed, various causes, such as the uncertain condition of the wheat market, the derangement of oversea shipping, and the occurrence of indifferent seasons, combined to bring about a considerable decline in the volume of agricultural production, which reached its lowest point in the bad season which occurred in 1919-20. However, partly as a result of the scarcity due to bad seasons, and partly owing to factors connected with the war, prices of agricultural produce advanced considerably after 1917, and the monetary value of production remained fairly constant until 1920-21, when the remarkable yield of wheat which followed the breaking of the drought and the high price guaranteed by the Government, based on world's parity, produced by far the most valuable crop of wheat yet harvested in New South Wales. In 1921-22 neither the season nor the markets were so favourable for wheat, and the value of grain produced was less than half that in 1920-21.

This decline, with the decrease in the value of hay crops, caused a drop of £12,000,000 in the value of agricultural production. The value of some minor crops, notably fruit, increased in value.

The large part played in recent years by market conditions in determining the returns of the agricultural industry is shown by the following comparison of the farm value of agricultural products in the year of production and the value of the same products if the prices of 1911 had ruled :—

Year.	Actual Value in Year of Production.	Value if 1911 Prices had ruled.	Value added by Increase in Prices.	Year.	Actual Value in Year of Production.	Value if 1911 Prices had ruled.	Value added by Increase in Prices.
	£000	£000	£000		£000	£000	£000
1912 ...	11,817	12,284	(—) 467	1917-18 ...	13,685	11,385	2,300
1913 ...	12,378	12,644	(—) 266	1918-19 ...	12,280	8,220	4,060
1914-15 ...	10,031	6,227	3,804	1919-20 ...	13,582	4,767	8,815
1915-16 ...	20,362	18,427	1,935	1920-21 ...	32,373	17,156	15,217
1916-17 ...	13,012	12,428	584	1921-22 ...	20,261	13,708	6,553

(—) Decrease.

It is apparent that the decline in the value of agricultural production in 1921-22 was due principally to the fall in prices, but the volume of agricultural production decreased by 21 per cent.

*Value of Production per Acre.*

The following table, showing the value of production from agriculture, together with the average value per acre, affords an interesting summary of the expansion of agricultural pursuits and a measure of the condition of the industry :—

Years ended June--	Average Annual Area Cultivated.	Average Annual Value of Production.	Average Value per Acre.
	acres.	£	£ s. d.
1887-91	858,337	4,030,611	4 13 11
1892-96	1,147,733	3,812,393	3 6 5
1897-1901	2,114,250	5,592,620	2 12 11
1902-06	2,515,268	6,302,903	2 10 1
1907-11	2,933,021	8,565,164	2 18 5
1912-16	4,507,748	12,867,474	2 17 1
1917	5,163,030	13,011,530	2 10 5
1918	4,460,701	13,684,900	3 1 4
1919	3,890,844	12,280,190	3 3 1
1920	3,770,155	13,582,090	3 12 1
1921	4,464,342	32,372,550	7 5 0
1922	4,445,848	20,260,770	4 11 2

The high value of production per acre shown in the ten years prior to 1897 was due to the fact that agriculture was on a smaller scale; cultivation was more intense than it has been in recent years, and the yield per acre usually higher. The increased value shown since 1918 has been due mainly to the high prices received for produce, but, in 1921, this factor was augmented by the record yield of wheat per acre. During the year ended 30th June, 1922, there was a decrease in the value of production per acre for all the principal crops, except sugar-cane.

The average value per acre of various crops during each of the last four seasons is shown below in comparison with the average for the ten years preceding 1921-22 :—

Crop.	Average Values per Acre.				Average Value for 10 Years preceding 1921-22.
	1918-19.	1919-20.	1920-21.	1921-22.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Wheat for Grain ...	1 9 9	1 9 9	6 8 11	3 2 6	2 10 2
Maize for Grain ...	5 1 3	11 0 2	6 15 2	6 2 0	5 16 1
Oats for Grain ...	3 1 4	2 4 4	3 2 2	2 17 3	2 12 4
Hay ...	5 6 6	5 16 2	8 14 1	7 6 4	4 12 10
Potatoes ...	14 2 7	32 1 6	10 14 6	8 4 11	12 4 2
Sugar-cane ...	36 11 9	31 11 8	52 1 0	60 4 1	35 0 10
Vineyards ...	30 5 4	39 15 6	36 13 5	30 17 7	24 3 3
Orchards ...	29 17 0	23 1 3	21 8 1	21 12 0	18 9 10
Market-gardens ...	43 18 4	51 15 10	56 3 4	75 12 0	41 12 9

This average value of production per acre measures the combined effect from year to year of yield obtained and prices realised, and may therefore be said to express the combined effect of market and season on the returns obtained by farmers from their holdings. To make the analysis a complete reflex of the condition of agriculture, modifying factors, such as the cost of production, drought, and other causes of loss, should be taken into consideration.

Between the 1915 and 1919 seasons the return from wheat grown for grain was far below the average. This fact shows clearly the serious effects of the recent bad seasons, and of the uncertain market, on the growing of the principal agricultural product. A comparison with the returns obtained from hay crops (which are principally wheaten) adds weight to this point. Not only has the value per acre of hay products been far higher absolutely, but, from year to year, there has been a considerable improvement in the prices realised. The market for hay, however, is local and limited. It is also apparent that wheat was almost unique in furnishing a decreasing return per acre until 1920-21, but the high yield and prices of that season afforded a large measure of compensation to growers. The values of other crops, except oats and potatoes, have all shown improvement.

#### WHOLESALE PRICES OF AGRICULTURAL PRODUCE.

The prices realised for agricultural produce in New South Wales, when not regulated by any authority, vary with the seasons, and, therefore, show very great fluctuations. Wheat and flour, for which alone a foreign market exists, have been closely regulated in price since 1914, and, except in the years 1915 and 1920, when low production rendered importation necessary, the prices were allowed to vary but little. In 1921, the prices of wheat and flour in New South Wales were maintained at a figure above world's parity in order to enable the payment to growers of the minimum price guaranteed by the Government—7s. 6d. per bushel. Wheat sold locally to millers for export as flour, up to 1920, however, brought considerably higher prices than the averages shown below. In the case of other produce, local production falls short of the requirements of the State, importation is usually necessary, and prices for these commodities are determined by external market conditions.

The quotations here given represent the average prices obtained for farm products in the various Sydney markets; for country districts due allowance must be made for cost of transportation, etc. The average for the year represents the mean of the prices ruling during each month, and does not take into account the quantity sold during the month. The prices ruling in each month of the year are shown in the "Statistical Register." The figures are those quoted by the middleman, and not those obtained by the producers.

Commodity.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Wheat .. .. bush.	0 4 10	0 4 9	0 4 9	0 5 1½	0 8 7½	0 8 8	0 5 8
Flour .. .. ton	11 5 4	11 1 0	11 0 0	11 5 9	18 10 11	19 6 7½	12 6 9
Bran .. .. bush.	0 0 10½	0 0 9½	0 0 9½	0 1 2½	0 1 9½	0 1 7½	0 1 6½
Pollard .. .. "	0 1 0½	0 1 0½	0 1 1	0 1 3	0 2 0	0 1 8½	0 1 7½
Barley (Cape) .. .. "	0 3 1½	0 3 5	0 4 1	0 5 3	0 7 11	0 3 7½	0 3 10
Oats .. .. "	0 2 10½	0 3 1	0 4 7	0 5 9½	0 5 7	0 3 5½	0 4 1½
Maize .. .. "	0 4 6	0 3 9½	0 5 7	0 8 0	0 8 7	0 5 3½	0 4 11½
Potatoes (local) .. .. ton	7 18 2	10 10 9	6 1 8	14 8 3	12 6 3	6 0 2½	6 15 11
Onions .. .. "	5 0 9	10 5 0	14 4 9	15 12 5	20 7 3	5 12 1½	12 7 10½
Hay—							
Oaten .. .. ton	4 7 0	4 16 0	6 4 2	9 19 2	11 18 8	7 11 10½	8 17 8½
Lucerne .. .. "	4 6 0	3 12 0	4 17 9	10 9 7	11 6 10	5 18 5½	6 13 7½
Chaff—							
Wheaten .. .. "	3 18 10	4 1 4	5 11 6	8 18 9	10 12 11	6 8 8½	6 16 8½

The relationship between the prices of wheat and flour have been constant in the past four years—1 ton of flour selling for as much as approximately 44 bushels of wheat.

The combined price variations since 1901 of agricultural produce in Sydney markets, weighted according to the average consumption in the three years 1911–13, are shown below. The prices in 1911 have been adopted as base.

Year.	Index No.	Year.	Index No.	Year.	Index No.
1901	834	1909	1134	1916	1163
1902	1266	1910	1012	1917	1127
1903	1181	1911	1000	1918	1377
1904	789	1912	1339	1919	1990
1905	972	1913	1069	1920	2430
1906	929	1914	1135	1921	1750
1907	1003	1915	1648	1922	1638
1908	1343				

It will be observed that, though seasonal causes operated to produce high prices in 1902, 1903, 1908, 1915, 1919, and 1920, there was, nevertheless, a marked rise in the price level due to other causes. In December, 1921, the index number reached 1,434—the lowest point touched since 1918; by December, 1922, it had risen to 1,895, but dropped to 1,639 in February, 1923.

#### AGRICULTURAL MACHINERY.

For harvesting grain-crops the reaper and binder, the stripper, and the harvester are used, and there is considerable difference of opinion regarding the relative efficiency of each of these implements. The reaper and binder is employed almost exclusively in moist districts, but over the greater portion of the wheat areas conditions are favourable to the use of the harvester. A modern type of harvester, particularly adapted to Australian conditions,

produced and developed locally, has contributed largely to the expansion of wheat cultivation, since it has enabled grain to be garnered with a considerable saving of time and labour. It is, however, a matter of some debate whether this useful implement is adaptable to the conditions which will govern harvesting should the system of bulk-handling of grain receive extensive application.

The following statement shows the area cropped, the total value of the machinery used, and the value of the machinery used per acre, in Divisions of the State in the year 1921-22 :—

Division.	Area under Crop.	Value of Agricultural Machinery and Implements.	Value per Acre.
	acres.	£	£ s. d.
Coastal ... ..	262,096	992,340	3 15 8
Tableland ... ..	402,954	941,160	2 6 8
Western Slopes. ... ..	1,801,814	2,828,610	1 11 4
Central Plains and Riverina ... ..	1,970,743	3,064,230	1 11 1
Western ... ..	8,241	58,370	7 1 8
Total ... ..	4,445,848	7,884,710	1 15 5

In the coastal and tableland districts the areas under cultivation are small, including many small holdings highly developed for fruit-growing, dairying and market gardening, while on the slopes and plains the implements used serve large wheat farms. In the Western Division are a number of small irrigation settlements, but the area there farmed is too small to give an average which might be considered for purposes of comparison.

Increased use of agricultural machinery has been a feature in the development of agriculture in New South Wales during the past twenty years. The total value of agricultural machinery and implements in use on agricultural holdings has risen as follows :—1900-01, £2,065,780; 1910-11, £3,414,620; 1921-22, £7,884,710.

#### FERTILISERS.

In New South Wales superphosphate is the only artificial fertiliser used extensively, the soils in the wheat areas being generally deficient in phosphoric acid. Tests of manure conducted on the farmers' experiment plots indicate that the benefits derived from the application of superphosphates to wheat-lands, as a general rule, are most marked in the southern portion of the wheat-belt, viz., the South-western Slope and the Riverina. The beneficial results gradually diminish throughout the western districts which form the central portion of the wheat-belt, and in the north-western districts no advantage is gained by the use of this fertiliser. The results may be affected, however, by the fact that fallowing is more common in the south than in the west, and much more than in the north. In wheat-growing the amount of superphosphate applied is generally only 56 lb. per acre, the average in 1921-22 was 50 lb. per acre.

The following table shows the area of land and the quantity of manure used during the year 1921-22 :—

Division.	Area under Crop.	Total Area Manured.	Area Manured per cent. of Area under Crop.	Manures Used.			
				Natural (only).	Natural and Artificial, in Combination.		Artificial (only).
					Natural.	Artificial.	
	acres.	acres.		loads.	loads.	cwt.	cwt.
Coastal ... ..	262,096	37,641	14·4	82,233	75,055	63,412	92,420
Tableland ... ..	402,954	75,748	18·8	9,130	1,420	385	48,621
Western Slopes ..	1,801,814	659,332	36·6	2,518	200	21	274,561
Central Plains ...	554,016	156,327	28·2	520	...	...	54,558
Riverina ... ..	1,416,727	1,174,614	82·9	3,794	1	6	518,551
Western ... ..	8,241	667	8·1	1,456	...	...	1,175
Whole State ...	4,445,848	2,104,329	47·3	99,651	76,676	63,824	989,886

The application of manures to agricultural lands is practised most extensively in the southern districts, the proportion of the cultivated area manured in 1921-22, being 82·9 per cent. in the Riverina, and 75·0 per cent. in the south-western slopes. Only 28·2 per cent. of the lands cropped in the remainder of the central plains were manured.

The proportion of manured land in relation to the total area cultivated in the State has been somewhat less than one-half, although, as shown in the following table, a considerable increase in the use of fertilisers took place between 1907 and 1913, since when the area manured has declined with the area cropped.

The following table shows the total area cultivated, the total area manured, and the nature of the manures employed, in various years between 1907-8 and 1921-22.

Season.	Total Area under Crop.	Total Area Manured.	Area Manured per cent. of Area under Crop.	Manures Used—	
				Natural.	Artificial.
	acres.	acres.		loads.	cwt.
1907-8	2,570,137	423,678	16·5	144,021	276,120
1913-14	4,568,841	2,226,742	48·7	166,753	1,010,596
1915-16	5,794,835	2,753,431	47·5	177,788	1,132,446
1918-19	3,890,844	1,780,254	45·7	180,734	856,074
1919-20	3,770,155	1,708,762	44·5	172,878	871,836
1920-21	4,464,342	1,998,429	44·8	160,361	998,191
1921-22	4,445,848	2,104,329	47·3	176,327	1,053,710

Extensive manurial trials are made regularly by the Department of Agriculture with the view of encouraging the adoption of better methods, and of demonstrating to farmers that largely-increased yields result from

scientific cultivation. It is in this important respect that much hope rests for the ultimate improvement of the low average wheat yield at present obtaining.

The sale of artificial manures is regulated by the Fertilisers Act of 1904, under the provisions of which measure the vendor is required to furnish to the purchaser a statement as to their nature and chemical composition. Further legislation has been urged for the more adequate protection of farmers.

#### SHARE-FARMING.

The system of working the land known as share-farming has played an important part in the development of agriculture in New South Wales. It took its rise towards the end of the last century, and helped to overcome the difficulties which had retarded the extension of cultivation. Land-holders could not obtain workmen to till large areas of their land, while new settlers were impeded for lack of cleared land, and of the necessary farming facilities.

The principles of the system are as follow. The owner provides suitable land and sometimes seed and fertiliser, and the farmer generally provides the necessary plant and labour. The contract usually is that the land be operated for a specified purpose and a fixed time. Various arrangements are made for sharing the product. Sometimes the parties to the agreement take equal shares of the produce up to a specified yield, and any excess goes to the farmer as a bonus. In other cases the owner takes one-third and the farmer two-thirds of the total product.

The following table shows particulars regarding the areas used for cultivation or dairying on shares during the past five years:—

Season.	Holdings.	Share-farmers.	Area Farmed on Shares.		
			Cultivation.	Dairying.	Total.
	No.	No.	acres.	acres.	acres.
1917-18	1,950	3,461	861,573	80,647	942,220
1918-19	1,530	2,675	666,264	79,622	745,886
1919-20	1,501	2,423	576,548	95,424	671,972
1920-21	1,668	2,761	614,351	121,976	736,327
1921-22	2,246	3,449	677,197	183,878	861,075

Practically the whole of the area cultivated on the share-system is devoted to wheat-growing. The system reached its maximum development in 1915-16, when the area cultivated under it exceeded one-fifth of the total area under crop in the State. Up to 1919-20 the returns from wheat-growing were bad on account of droughts and market difficulties, and share-farming contracted more rapidly than other systems of cultivation. A marked revival occurred under the stimulus of the favourable seasons 1920-21 and 1921-22.

Of the areas cultivated in 1921-22 on the share system, 341,110 acres were in the Western Slopes Division and 206,685 acres were in the Riverina.

#### AGRICULTURAL EMPLOYMENT.

The following is a comparative statement of the number of men returned by land-holders as being constantly employed principally in cultivating rural



holdings during each of the past ten years. Many casual and itinerant workers are omitted from account.

Year.	Males.	Number of Cultivated Holdings.	Year.	Males.	Number of Cultivated Holdings.
1912-13	57,209	48,943	1917-18	47,858	47,275
1913-14	59,337	50,955	1918-19	43,342	44,509
1914-15	57,602	49,269	1919-20	47,002	45,608
1915-16	56,474	50,653	1920-21	48,214	48,664
1916-17	52,259	49,998	1921-22	46,666	49,830

\* Includes all holdings on which there was cultivation however slight.

It is apparent that the number of males permanently employed in agricultural pursuits fluctuates seasonally and in fairly close sympathy with the number of cultivated holdings. A marked decrease occurred during the war years, and many persons lost to agriculture in that period have not been regained. The influence of an adverse season was particularly noticeable in 1918-19.

The number of persons recorded at the Census of 1921 as being engaged in agricultural pursuits was 94,508, of whom 93,598 were males and 910 females. This represented an increase of 15,999 males and a decrease of 726 females since 1911, the net increase being 15,273 persons. In the same period the proportion of male breadwinners engaged in agricultural pursuits decreased slightly from 13·4 per cent. to 13·1 per cent., and the proportion of persons engaged in agricultural pursuits decreased from 4·8 per cent. to 4·5 per cent. of the total population.

The census classification includes certain Government officials, farm servants, and others connected with agricultural operations, but not actually engaged in cultivating the soil.

#### THE DEPARTMENT OF AGRICULTURE.

Considerable attention is paid by the Government to the development of the agricultural industry, but great scope still exists for educational and scientific work in the industry in order that the resources of the State may be used with full advantage to the community.

The Department of Agriculture, created in 1890 to advance the interests of the farmers and fruit-growers of New South Wales, deals with all matters essential to agriculture. Its practical functions include the collection of information by scientific investigation and practical experiments relating to the causes of the failure of crops, improved methods of cultivation, means of combating pests, the use of fertilisers, matters of drainage and irrigation, new plants and new implements, the disposal of surplus products, the transport of produce, and the promotion of a community spirit among farmers. Much information is placed at the disposal of the agricultural producers of the State, and other assistance is rendered to them.

The officials answer many inquiries for advice or assistance, and visit various parts of the country throughout the year to give demonstrations to the farmers, and to advise generally regarding agricultural methods. During the last few years the practical services of the Department have been extended greatly by conducting experiments with various crops, fertilisers, and cultivation methods on the lands of private farmers. These amount to demonstrations of the value and efficiency of the scientific methods recommended by the Department, and they are having a marked influence on

farm practice in many parts of the State. Local officers of the Department supervise these trials and bring the results under the notice of farmers in the vicinity. In 1921-22, 423 experiments were conducted by 245 individual farmers throughout the State.

The *Agricultural Gazette*, the official organ of the Department, is issued monthly. It presents to the farmers of the State the results of scientific researches and of the investigations of official experts.

Numerous bulletins and leaflets are issued for the guidance of various classes of rural workers, and most of the publications of the Department are supplied free to persons engaged in rural industries.

Country newspapers are furnished weekly with notes describing the investigations and educational operations of the Department with respect to improved methods of agriculture, dairying, stock-raising, etc. Efforts have been made to develop many phases of primary production, fallowing, rotation in cropping, and the cultivation of maize being specially treated.

The principal heads of receipts and expenditure of the Department of Agriculture during the year ended 30th June, 1922, were as follow :—

<i>Receipts.</i>				<i>Expenditure.</i>			
			£				£
Agricultural College, Experiment				Agricultural College, Experiment			
Farms, etc. ... ..			77,770	Farms, etc. ... ..			157,885
Fees for fumigation, etc. ... ..			9,617	Bulk Handling of Wheat, Grain			
Miscellaneous ... ..			2,342	Elevators ... ..			579,600
Stock Branch ... ..			6,799	Administrative ... ..			108,571
Bulk Handling of Wheat, Grain							
Elevators ... ..			26,861				846,056
			123,389				
Less Refunds ... ..			322	Less Refunds ... ..			15,448
							830,608
				Stock and Brands, Pastures Pro-			
				tection ... ..			107,635
				Botanic Gardens, etc. ... ..			45,261
				Commercial Agents ... ..			5,000
Total ... ..			£123,067	Total ... ..			*£988,504

#### *Agricultural Bureau.*

An Agricultural Bureau has been established with the support and co-operation of the Department. Its object is to foster the establishment in rural centres of societies, which will encourage primary producers to meet together regularly for the purpose of exchanging ideas and experiences on every kind of subject that touches rural life, and it aims especially at making scientific methods more popular. Assistance is rendered by the officers of the Department, many of whom visit the branches from time to time to deliver lectures and conduct practical demonstrations in some subject of local interest. The movement has exhibited already a tendency toward co-operation in the purchase of stores. A large number of branches have reported successful transactions in "pool" buying as unregistered co-operative societies. A branch at Milbrulong effected an average saving of 10 per cent. in purchasing farmers' supplies of an aggregate value of approximately £7,000. In seven months the branch at Yerramalong had a turnover of £1,000, goods being handled on a non-profit-making basis. Other

\* In addition there was expended £6,357 by the Stores Supply Department and £1,768 by the Resumed Properties Department on behalf of the Department of Agriculture.

branches have found it advantageous to purchase for members in bulk supplies of fertilisers, potatoes, molasses, blue-stone, machinery, oil, &c. In two or three cases regular co-operative societies are growing out of the branches of the bureau. The social side is not neglected, and some branches have ladies' sections. The bureau admits children, and definitely caters for them by providing competitions of various kinds and encouraging appreciation of civic responsibilities. In this way the bureau is assisting to make rural life more attractive.

Government assistance is granted in the form of subsidies payable to each branch at the rate of 10s. for every £1 of membership fees. Although the State assists the branches in this respect, the primary object of the Bureau is to develop a spirit of self-help and co-operation in the widest sense of those terms. To facilitate this the control of each branch is placed entirely in the hands of its members, who may, therefore, develop their organisation along lines where united action is most useful. However, discussion of religious matters or party politics is not permitted in any branch. The bureau was established in 1911, and at the 30th June, 1922, there were 165 branches, of which 132 were reporting regular meetings. Periodically district and State conferences are held, and generally these are largely attended.

#### AGRICULTURAL EDUCATION AND EXPERIMENTS.

The system of agricultural training in vogue in the educational institutions of New South Wales is not nearly so extensive as those of some other countries. In the primary schools pupils receive instruction in nature study and some training in elementary agriculture; school gardening also is commonly taught. Eleven rural schools of agriculture with primary and super-primary courses have been established. Specialised tuition is given at various schools on the Murrumbidgee Irrigation Area, three secondary schools include agriculture in their curriculum, and two agricultural high schools have been established, covering courses of three years, leading to Hawkesbury Agricultural College. A Faculty of Agriculture was established at the University in 1911; in which in 1922 there were 30 students attending lectures, and 2 research scholars.

In order to obtain a knowledge of local conditions and to afford an education in agriculture on scientific bases, the Government has established the Hawkesbury Agricultural College, a number of experiment farms, several viticultural nurseries, an apiary, a stud-horse farm, and an agricultural training farm, besides farmers' experiment plots throughout the State.

Facilities are afforded for the accommodation of students at the various experiment farms. In addition, schools of instruction for dairy factory workers are held periodically, and winter schools for students of both sexes are held annually at Hawkesbury Agricultural College.

#### *Hawkesbury Agricultural College.*

The Hawkesbury Agricultural College provides accommodation for resident students, and imparts theoretical and practical instruction in a three-years' course, which embraces every department of agriculture. Instruction is given also in dairying, pig-raising, horse, sheep, and poultry-breeding; and experimental research work is conducted in connection with cereal and other crops, in cultivation with fertilisers, and in soil culture. All subsidiary branches of farm-labour are taught, including blacksmithing, carpentry, sheep-killing, bee-keeping, and other occupations incidental to the pursuit of agriculture. In June, 1922, there were 154 students in residence.

Jersey dairy cattle and Romney Marsh sheep are bred, also stud pigs of various breeds, which are sold to farmers throughout the Commonwealth and New Zealand. In the poultry section the egg-laying competitions attract a large number of competitors from various parts of the State.

### *Experiment Farms.*

Work of a general educational and research nature is conducted at the experiment farms, which have been established in various parts of the State with varying curricula, adjusted to meet local needs and climatic conditions. The aim is to disseminate better knowledge of the practice of agriculture in established industries, to encourage by example new activities suited to the locality, to demonstrate in a practical manner the agricultural possibilities of the State, and, in some cases, to afford instruction for students.

Particulars as to each farm are given in the following table:—

Farm.	Particulars (as at 30th June, 1922.)			Special Purposes.
	Area.	Students in Residence.	Fees Payable.	
	Acres.	No.		
Wagga Wagga .. .. .	3,220	23	1st year £20 2nd " £15	Specialises in seed wheat.
Bathurst .. .. .	752	18	.. .. .	Orchard and soil culture.
Wollongbar and Duck Creek	734	21	.. .. .	Stud farm—Dairy cattle and pigs.
Berry .. .. .	403	..	.. .. .	Stud farm—Dairy cattle.
Howlong Viticultural Station	224	..	.. .. .	Phylloxera-resisting vines.
Grafton .. .. .	1,075	22	.. .. .	Mixed farming suited to sub-tropical districts.
Glen Innes .. .. .	1,073	21	.. .. .	Mixed farming and fruit culture.
Cowra .. .. .	1,011	27	.. .. .	Specialises in seed wheat and cross-breeding with sheep.
Pera .. .. .	1,153	..	.. .. .	Artesian-bore water applied to orchard culture.
Narara .. .. .	100	..	.. .. .	Phylloxera-resisting vines.
Yanco .. .. .	2,045	12	.. .. .	Irrigation, ostrich farming and mule-breeding.
Nyngan .. .. .	5,049	..	.. .. .	Dry-farming. Merino sheep suitable for dry areas.
Coonamble .. .. .	1,945	..	.. .. .	Dry-farming. Wheat cultivation and sheep-farming.
Temora .. .. .	1,606	..	.. .. .	Specialises in seed wheat.
Condobolin .. .. .	1,348	..	.. .. .	Dry-farming. Suitable varieties of wheat.
Trangle .. .. .	9,736	..	.. .. .	Stud-merino farm, also specialises in wheat culture.
Bangaroo .. .. .	5,037	..	.. .. .	Stud farm—Horses.
Glenfield .. .. .	112	..	.. .. .	Veterinary experiments.
Griffith .. .. .	59	..	.. .. .	Mother-stock vineyard. Irrigated area.
Wauchope Apiary .. .. .	36	..	.. .. .	Study of diseases among bees.
Total .. .. .	36,748	144	.. .. .	.....

### *Farrer Scholarships.*

The Farrer memorial fund was established by public subscription in honour of the late William J. Farrer, whose work in the production of new wheats has afforded great benefit alike to the industry and to the community. The money subscribed has been vested in trustees, and the interest is used for the Farrer research scholarship, the specific object of which is the improvement of wheat cultivation. The scholarship is granted to a candidate selected by the trustees. At 30th June, 1922, the capital amount of the fund was approximately £1,800.

The selected scholar presents his results at the close of the year in the form of a paper, to be published by the trustees. At the end of the year the holder of the scholarship may be re-appointed, or a new selection made.

The Government Farrer scholarship is offered for competition amongst students wishing to enter the Hawkesbury Agricultural College with a special view to the study of wheat-cultivation.

The *Daily Telegraph* Farrer scholarship consists of a grant of books, apparatus, etc., to the value of £10, given each year by the *Daily Telegraph* Newspaper Co., Ltd., to the best first-year wheat student at the Bathurst or Wagga experiment farm.

#### WHEAT.

Wheat is the staple agricultural product of New South Wales, and its cultivation provides a means of livelihood for a large section of the population. It is the principal activity on 15,000 of the 75,000 rural holdings of the State and three-quarters of the total area under crop are devoted to wheat. The farm value of production of wheat-crops (other than those used as green fodder) in 1921-22 was £12,777,000.

The mild climate of New South Wales makes it possible to work the soil on scientific lines throughout the year, and admits of the utilisation of paddocks for pastoral purposes after the crop has been harvested.

The area suitable for wheat-growing in New South Wales may be defined roughly as those parts of the State where precipitation is not excessive, but which have sufficient rainfall—about 10 inches between April and October—to admit of ploughing operations at the right time of the year, to cover the growing period of the wheat plant and to fill the grain during the months of September and October; or in the case of districts where the rainfall in these months is less, to counteract the deficiency by the increased falls in the earlier or later months. The main wheat-growing districts extend for more than 500 miles in a north-westerly direction from the southern boundary, and have a maximum width of 130 miles; on the east they are distant almost uniformly about 120 miles from the coast.

The coastal region is unsuited to wheat on account of the absence of suitable soils and of the prevalence of rust and other diseases occasioned by heavy rains. Only small areas on the Tablelands are suitable for wheat-growing, and the far West has insufficient rainfall to make wheat-growing profitable except under extraordinary conditions. Between the Tablelands and the Western Division lie considerable tracts of slope and plain eminently adapted to the cultivation of wheat. It is in this area, and particularly in the southern and central portions, that most of the wheat of the State is grown, and it is here that the prospects of a large development in the wheat industry in the near future are brightest.

Most wheat is grown in districts where the average rainfall in the growing season—April to October—is between 11 and 15 inches, and little is grown in eastern districts where it exceeds 20 inches.

On the map forming the frontispiece of this Year Book are shown lines which represent the western limit of profitable wheat-growing for grain, as determined by experience, to the years 1904, 1912, and 1922, and the eastern limit in 1922. These show how great has been the expansion westward due to improvement in the methods of cultivation, and to the production of improved varieties of wheat. Between 1904 and 1912 the area added to the wheat belt by extension westwards was approximately 13,500,000 acres, and between 1912 and 1922 a further area of 6,000,000 acres was

added. The total area of land between the eastern and western lines existing in 1922 was 53,000,000 acres. Probably, however, not more than one-half of the land comprised in these areas is arable.

A most noticeable feature of the development of wheat-growing was the expansion in districts with a low average rainfall. Formerly, it was thought that the line of 10-inch rainfall during the growing season was the limit of profitable wheat-growing, and in 1912, the wheat line extended a short distance beyond this limit only in the southern and northern parts of the Riverina; but, by 1922, wheat had been profitably grown on a commercial scale as far west as Hillston in the north, and Balranald in the south, with average rainfalls of 9.12 and 7.89 inches respectively in the growing period. In addition, wheat was grown profitably around Nevertire in the central-western plains, where the average rainfall between April and October is only about 9½ inches. The total area of land included in that part of the wheat belt where the average rainfall is less than ten inches in the growing season is 5,000,000 acres.

In his evidence before the Select Committee of Inquiry into the Agricultural Industry in 1921, Mr. F. B. Guthrie, chemist, Department of Agriculture, stated that in his opinion approximately 26,000,000 acres of land could be cultivated profitably for wheat in New South Wales. Of this area he assumed that one-fifth would be cultivated for wheaten hay, leaving 21,000,000 acres as the maximum to be cropped for grain.

Particulars obtained by the Government Statistician in 1922 from owners and occupiers of agricultural and pastoral holdings showed that there were 17,905,000 acres of alienated land in the State which, in the opinion of the occupiers, were suitable for cultivation, and that of these, 12,058,000 acres were within about 12 miles of certain railways in the wheat belt. In the same year the Chief Inspector of Agriculture estimated that of 34,000,000 acres of land (both Crown and freehold) within about 12 miles of certain railways in the wheat belt, 18,900,000 acres were arable.

Further particulars of the extent and distribution of these areas, and of the number, size, and value of the alienated holdings comprised in them are shown in part Rural Settlement of this Year Book.

The total area of land in New South Wales on which wheat has been cultivated in recent years (including the new land sown in 1922) is approximately 7,500,000 acres, but of this area only about one-half is sown with wheat each season; the remainder is partly left in fallow, planted with other crops, or used for grazing purposes only. The total area of new land cultivated for wheat between 1911 and 1922 was 3,251,000 acres.

The following statement shows the approximate areas of new land, of fallowed land, and of stubble land, sown with wheat during each of the past ten seasons:—

Season.	New Land.	Fallowed Land.	Remainder Stubble Land.	Total.
	acres.	acres.	acres.	acres.
1913-14	569,750	983,300	2,209,966	3,763,016
1914-15	412,100	947,700	2,783,216	4,143,016
1915-16	554,600	994,000	3,573,645	5,112,245
1916-17	323,600	846,000	3,328,710	4,498,310
1917-18	251,700	831,000	2,745,736	3,828,436
1918-19	128,300	932,700	2,166,374	3,227,374
1919-20	91,100	847,100	2,130,340	3,068,540
1920-21	142,900	749,600	2,770,852	3,663,352
1921-22	232,700	935,200	2,519,147	3,687,047
1922-23	199,900	1,416,000	2,291,460	3,907,360

*Development of Wheat Growing.*

Wheat growing as an industry in New South Wales has progressed slowly during a period of thirty years; to-day less than one-sixth of the area suited to wheat is cultivated each year.

The following statement shows the area under wheat for grain and for hay, together with the total production, average yield per acre, and quantity exported since 1897-98, when a surplus of wheat for export was first produced :—

Season.	Area under Wheat.				Yield.		Average yield per acre.		Quantity of Flour exported overseas in calendar year following season.
	For Grain.	For Hay.	Fed-off.	Total.	Grain.	Hay.	Grain.	Hay.	
	acres.	acres.	acres.	acres.	thousand bushels.	thousand tons.	bushels.	tons.	thousand bushels.*
1897-98	993,350	213,720	†	1,207,070	10,560	182	10·6	·85	582
1898-99	1,319,503	312,451	†	1,631,954	9,276	177	7·0	·57	437
1899-00	1,426,166	414,813	†	1,840,979	13,604	341	9·5	·32	865
1900-01	1,530,609	332,143	†	1,862,752	16,174	348	10·6	1·05	4,788
1901-02	1,392,070	312,358	†	1,704,928	14,809	287	10·6	·92	2,914
1902-03	1,279,760	320,588	†	1,600,348	1,585	76	1·2	·24	154
1903-04	1,561,111	286,702	†	1,847,813	27,334	452	17·5	1·58	9,772
1904-05	1,775,955	284,367	†	2,060,322	16,464	207	9·3	·73	5,601
1905-06	1,939,447	313,582	†	2,253,029	20,737	305	10·7	·97	5,338
1906-07	1,866,253	316,945	16,744	2,199,942	21,818	408	11·7	1·27	6,246
1907-08	1,390,171	365,925	129,813	1,885,909	9,156	198	6·6	·54	962
1908-09	1,394,056	490,828	104,202	1,989,086	15,483	427	11·1	·87	4,866
1909-10	1,990,180	380,784	5,825	2,376,789	28,532	566	14·3	1·49	12,111
1910-11	2,128,826	422,972	61,458	2,613,256	27,914	468	13·1	1·11	14,423
1911-12	2,380,710	440,243	80,731	2,901,684	25,088	423	10·5	·96	10,172
1912-13	2,231,514	704,221	31,557	2,967,292	32,487	780	14·6	1·11	17,116
1913-14	3,205,397	534,226	23,393	3,763,016	38,020	588	11·9	1·10	20,038
1914-15	2,758,024	560,431	815,561	4,143,016	12,831	355	4·7	·62	785
1915-16	4,188,865	879,678	53,702	5,122,245	66,765	1,212	15·9	1·38	23,514
1916-17	3,806,604	633,605	58,101	4,498,310	36,598	814	9·6	1·28	21,262
1917-18	3,329,371	435,180	63,885	3,828,436	37,712	485	11·3	1·11	12,650
1918-19	2,409,669	613,544	204,161	3,227,374	18,325	517	7·6	·84	19,994
1919-20	1,474,174	716,770	877,596	3,068,540	4,388	355	8·0	·49	427
1920-21	3,127,377	520,555	15,420	3,663,352	55,625	822	17·8	1·58	41,746
1921-22	3,194,949	467,363	24,735	3,687,047	42,767	575	13·4	1·23	21,798
1922-23	2,962,140	603,260	326,960	3,907,360	28,594	655	9·7	1·08	†

\* Flour has been expressed as wheat at 1 ton of flour per 50 bushels of wheat.

† Information not available.

From this record of twenty-six years' experience it will be observed that a poor wheat yield was obtained at intervals of more or less regular recurrence, viz., in the years 1898-9, 1902-3, 1907-8, 1914-15, 1918-19 and 1919-20, and that unfavourable seasons were particularly prevalent between 1914 and 1919. The remarkable recuperative powers of the wheat lands in favourable seasons were demonstrated in the seasons 1903-04 and 1920-21, when, following severe droughts, record years were obtained.

The area under wheat increased rapidly during the period 1912-15, when the maximum of over 5 million acres was reached. The decreases in later seasons were due mainly to a shortage of labour, unfavourable ploughing seasons, and difficulties in regard to the disposal of the harvest during the war period; moreover, the high prices obtainable for sheep and wool until the end of 1920 caused many farmers to substitute sheep-raising for wheat-growing. In 1920-21 splendid yields and high prices encouraged growers to extend their operations, and, despite the adverse season in 1922 the areas under wheat were greater than in any preceding season except those of 1914, 1915, and 1916.

The following statement shows the development of wheat-growing for grain in the various Divisions of the State:—

Division.	Area under Wheat for Grain.			Proportion in each District.		
	1905-06.	1915-16.	1921-22.	1905-06.	1915-16.	1921-22.
	acres.	acres.	acres.	per cent.	per cent.	per cent.
Coastal ... ..	10,845	5,217	3,391	0·6	0·1	0·1
Tableland—						
Northern ... ..	14,546	7,642	8,205	0·7	0·2	0·3
Central ... ..	113,636	169,546	123,263	5·9	4·0	3·9
Southern ... ..	13,538	20,888	11,036	0·7	0·5	0·3
Total ... ..	141,720	198,076	142,504	7·3	4·7	4·5
Western Slopes—						
North ... ..	217,992	434,088	344,768	11·2	10·3	10·8
Central ... ..	343,928	693,099	556,845	17·7	16·6	17·4
South ... ..	350,780	901,799	535,307	18·1	21·5	16·8
Total ... ..	912,700	2,028,986	1,436,920	47·0	48·4	45·0
Plains—						
Northern ... ..	5,909	27,522	29,345	0·3	0·6	0·9
Central ... ..	243,451	464,041	452,553	12·6	11·3	14·2
Riverina... ..	620,616	1,463,728	1,128,671	32·0	34·9	35·3
Total ... ..	869,976	1,955,291	1,610,569	44·9	46·8	50·4
Western Division...	4,206	1,295	1,565	0·2	...	...
All Divisions ...	1,939,447	4,188,865	3,194,949	100·0	100·0	100·0

Considered relatively and absolutely, the Riverina shows the greatest development, and improvements of less note are to be observed in the Central Plains and in the various divisions of the Western Slopes. The plains and slopes divisions combined embrace 95 per cent. of the total area sown.

This analysis is made more complete by a consideration of the yield of wheat in these Divisions in the same seasons.

Division.	Yield of Grain.			Average Yield per Acre.		
	1905-06.	1915-16.	1921-22.	1905-06.	1915-16.	1921-22.
	bushels.	bushels.	bushels.	bushels	bushels	bushels
Coastal ... ..	63,638	33,881	35,631	5·9	6·5	10·5
Tableland—						
Northern ... ..	213,706	79,172	103,314	14·7	10·4	12·6
Central ... ..	1,159,137	3,242,286	1,483,737	10·2	13·2	12·0
Southern ... ..	153,789	419,456	160,686	11·4	20·1	14·6
Total... ..	1,526,632	3,740,914	1,747,737	10·8	18·9	12·3
Western Slopes—						
North ... ..	2,221,094	5,616,454	3,893,922	10·2	12·9	11·3
Central ... ..	3,037,476	11,325,164	6,704,562	8·8	16·3	12·0
South ... ..	4,603,764	16,426,101	7,748,796	13·1	18·2	14·5
Total ... ..	9,862,334	33,367,719	18,347,280	10·8	16·4	12·8
Plains—						
Northern ... ..	41,032	250,976	361,104	6·9	9·1	12·4
Central ... ..	1,977,162	4,350,890	5,988,252	8·1	9·4	13·2
Riverina... ..	7,243,888	25,011,778	16,277,483	11·7	17·1	14·4
Total ... ..	9,262,082	29,613,644	22,626,839	10·6	15·1	14·0
Western Division	22,514	8,752	9,513	5·4	6·8	6·1
All Divisions ...	20,737,200	66,764,910	42,767,000	10·7	15·9	13·4



*Average Yield of Wheat.*

The foregoing table indicates that there is considerable variation between the yields of the various divisions of the State. The main wheat districts are in the plains and slopes. The yield of wheat usually is greatest in the southern districts, and least in the northern, the actual results in 1921-22 being as follow :—1,665,000 acres in the southern districts yielded an average of 14·5 bushels per acre; 1,132,700 acres in the central districts yielded 12·5 bushels per acre; and 382,000 acres in the northern districts yielded 11·4 bushels per acre.

The average yield of wheat in New South Wales is subject to marked fluctuations by reason of the widely divergent nature of the seasons. The highest yields have been recorded after the worst droughts, and besides giving dramatic proof of the advantages of fallowing, have gone far to make immediate compensation for the losses sustained. The lowest yield on record—that of the 1902 season—was only 1·2 bushels per acre. It was followed by a yield of 17·5 bushels per acre, which was only surpassed in 1920-21, when, after the severe drought of 1918-20, a record average of 17·8 bushels per acre was obtained. The yield in recent years has been steadily increasing, but is considerably below that which was obtained prior to the expansion of the wheat industry, when probably only some of the best wheat lands were tilled. The general average for the last ten years shown below was reduced by the occurrence of no less than four adverse seasons. In decennial periods the average yields in New South Wales have been as follow :—

Period.	Average Yield per acre.	Period.	Average Yield per acre.
	bushels.		bushels.
1872-1881	14·71	1902-1911	11·04
1882-1891	13·30	1912-1921	11·62
1892-1901	10·02		

The yield of wheat in New South Wales does not compare favourably with the yields usually obtained abroad in some of the large wheat-producing countries. Smaller producing countries, particularly those situated in the colder climates, show far greater average yields. Representative averages in recent years are shown below :—

Country.	Period.	Average Yield per acre.	Country.	Period.	Average Yield per acre.
		bushels.			bushels.
United Kingdom ...	1914-1920	31·6	New South Wales ..	1912-1921	11·6
New Zealand...	1914-1920	26·1	Australia ...	1912-1920	11·2
Canada ...	1914-1920	15·4	Russia (proper) ...	1909-1918	10·3
United States ..	1914-1920	14·6	Argentina ...	1914-1920	9·7

It is believed that, when more scientific methods of cultivation are widely adopted in New South Wales, and land is properly fallowed, tilled, and manured, the yield per acre will be increased considerably; and a further favouring factor exists in the great possibilities that attach to the improvement of wheat types by plant-breeding. However, it is anticipated that the warm climate and the prevalence of hot winds during the ripening period will always militate against a high average yield being obtained in New South Wales, such as is obtained in more humid countries.

*Size of the Wheat Farms.*

The expansion of the wheat industry has been brought about more by reason of the fact that growers have cultivated larger areas than by any marked increase in the number of growers, although in bad seasons, such as 1918-19-20, it was evident that many former growers did not plant crops. If it be considered that, in normal seasons, a farm of less than 250 acres devoted exclusively to wheat will not provide subsistence for a farmer and his family, it is apparent, in view of the low average area, that wheat-growing in many cases must be conducted in conjunction with other pursuits, and that in adverse seasons many farmers derive a living from sources other than agriculture.

The following table illustrates the recent development of wheat-growing in respect of number and average size of areas sown :—

Year.	Holdings on which Wheat was grown.	Total Area sown with Wheat.	Average Area per Holding devoted to Wheat.
	No.	acres.	acres.
1900-01	20,149	1,862,752	92
1905-06	19,049	2,253,029	118
1915-16	22,453	5,122,245	224
1918-19	17,281	3,227,374	187
1919-20	16,266	3,068,540	188
1920-21	17,790	3,663,352	206
1921-22	18,216	3,687,047	202
1922-23*	18,007	3,307,360	217

\*Subject to Revision.

The following table provides a summary of the areas of holdings on which wheat was grown for grain in the season 1921-22, arranged in groups according to the area cropped for grain :—

Area cropped for Grain.	Holdings.	Wheat-grain.			
		Area cropped.	Production.	Average Yield per acre.	
				1921-22.	1920-21.
acres.	No.	acres.	bushels.	bus.	bus.
1-49	3,423	72,302	846,486	11·7	17·2
50-299	9,600	1,460,462	19,396,908	13·3	18·1
300-999	3,092	1,374,242	18,754,296	13·7	17·7
1,000-1,999	152	193,326	2,712,351	14·0	17·5
2,000-10,484	28	94,617	1,057,155	11·2	16·3
Total ...	16,295	3,194,949	42,767,196	13·4	17·8

In this table wheat-farms are divided somewhat arbitrarily into five classes graded according to the area cultivated. Those where less than 50 acres are cultivated may be considered to be held by growers earning their livelihood principally in other directions; these number 3,423, or 21 per cent. of the total; where the areas cultivated range from 50 acres to 299 acres growers may be considered to draw their sustenance from wheat-growing in a degree ranging from partial to complete dependence; these number 9,600, or 58·91 per cent. of the total; where the area cultivated exceeds 300 acres, it may be considered generally that hired labour is employed in connection with the whole of the operations, or that more than one grower is involved.

In all, areas of less than 30 acres in extent were sown with wheat for grain on 2,328 farms. The total number of areas under 100 acres in extent sown

with wheat for grain was 5,750; from 100 to 199 acres, 4,476; from 200 to 299 acres, 2,797; from 300 to 399 acres, 1,457; and from 400 to 499 acres, 740; the number in successive groups of 100 diminished rapidly thereafter. There were 28 wheat crops exceeding 2,000 acres in extent.

The average yield showed a definite relationship to the amount of land cultivated. The most productive areas were those between 1,000 and 2,000 acres in extent, while in 1920-21 the areas from 50 to 399 acres in extent were most productive. But in 1920-21 larger proportions of the smaller areas were cropped for hay and green fodder, and these usually embraced the inferior portions of the crop.

In 1921-22 1,712 farmers sowed wheat for hay or green fodder only, and 2,328 others cultivated less than 30 acres for grain. The number of farmers who cultivated wheat for grain on a commercial scale was, therefore, about 14,000.

### *Cost of Growing Wheat.*

Various attempts have been made to secure the data necessary to form an accurate estimate of the cost of producing wheat in New South Wales; but as, either for grain or for hay, this depends largely upon the methods of culture, the area cultivated, the distance from the railway, and the soil conditions, the experiences of individual farmers differ very greatly and analysis of farmers' budgets has given a wide range of results.

The factor which is probably the main cause of these differences is the efficiency of the producers. Wheat being the product of a large number of farmers working independently, it is natural that there should be greater variation in regard to efficiency than in other industries, where the producers are assembled under the supervision of experts and where there are greater facilities for improving methods of production and for utilising labour and materials on the most economical basis.

However, estimates have been made by Mr. A. H. E. McDonald, Chief Inspector of Agriculture, of the average cost of producing wheat on unfallowed and on fallowed land. For the purposes of the estimates the area cropped annually is taken at 250 acres, viz., 230 acres for grain, and 20 acres for hay for horse feed; to crop this area in alternate seasons under the system of fallowing, the total area of the farm would be at least 500 acres. The value of the land is assumed to be £6 per acre, and the value of the plant £680; as the farmer is assumed to be engaged throughout the year in cultivating and other operations in connection with wheat-growing, an amount of £260 per annum is allowed to cover the value of his labour. Experiments made by the Department of Agriculture indicate that an average yield of 20 bushels per acre may be obtained from fallowed land, and the cost of production under the fallowing system is calculated on this basis, while 12 bushels per acre is taken as the yield from unfallowed land; in each case one bushel per acre is deducted for seed wheat, and special allowance is made for seed wheat as an item of cost, since expenses incurred in its production are included under the various headings.

In the case of fallowed land one crop is grown in two years. Where fallowing is practised, interest for two years is therefore allowed, but the stubble and herbage on the land are available for at least six months, and where sheep are kept, as is usually the case, this feed has some value. It is difficult to assess, but is probably worth at least three shillings per acre. Credit at this rate might reasonably be given to fallowed land on this account. When the land is not fallowed, the stubble is usually burnt and ploughing commenced in February or March.

The expenditure in the purchase of bags is a heavy item in the wheat-grower's account. Silos for bulk handling are now in working order in some of the important wheat-growing centres, and it is possible for farmers in these districts to reduce considerably the number of bags used by them. The silos have not, however, been in use long enough to enable a determination to be made of the actual saving which will accrue through bulk-handling.

The costs of production under conditions existing in New South Wales in 1922, were estimated as follows :—

Item.	Unfallowed Land.		Fallowed Land.	
	Per acre.	Total.	Per acre.	Total.
Hypothetical net yield ... .. bushels	11	2,530	19	4,370
Costs—	£		£	
Land—Interest, 250 acres, at £6 per acre, 6 per cent. per annum ... ..	90		180	
Plant—Interest and Depreciation, value £680... ..	90		90	
Allowance for Repairs ... ..	20		20	
Wages—Extra help ... ..	45		45	
Fertiliser—Superphosphate, 6½ tons ... ..	41		41	
Bags—At 9s. per doz. ... ..	32		65	
Cartage of Wheat to Rail at 9d. per bag ... ..	32		55	
Total cost, exclusive of allowance for farmer's labour ... .. £	350		496	
Cost per acre cropped for grain .. ..	£ s. d. 1 10 6		£ s. d. 2 3 2	
„ bushel on rail .. ..	0 2 9		0 2 3	
Total cost, including allowance of £260 for farmer's labour ... .. £	610		756	
Cost per acre cropped .. ..	£ s. d. 2 13 0		£ s. d. 3 5 9	
„ bushel, on rail .. ..	0 4 10		0 3 6	

The yield of wheat per acre varies very considerably, not only between seasons, but during any particular season, as the vagaries of the weather, diversity of agricultural skill and practice, the different nature of soils, and other factors, exert an important influence on the yields obtained from the widely-scattered wheat farms of the State. The average yield employed in these calculations cannot be said to typify any particular locality; therefore, the estimated cost of production per bushel indicates a general average only when the yields are as shown. For ordinary purposes the average cost per acre may be considered as a more general criterion, and this is of service only when due allowance is made for the quantity of bags required for the particular yield, and the cost of cartage.

It is evident that wheat can be produced far more cheaply on fallowed than on unfallowed land, and that the farmer adopting the method of fallowing is able, by reason of the superior yield he obtains, to make a success where others on unfallowed land will fail.

The conclusion formed by a Select Committee on the Agricultural Industry in 1921 was that proper harvesting and cultivation of wheat cannot be carried out under existing conditions at a lower cost than £3 5s. per acre (excluding insurance), and that it will require an average of 14 bushels to the acre, with a minimum price of 4s. 8d. per bushel at the nearest railway siding, to recoup this cost to farmers within 10 miles, and “that profit over and above a labourer's wage” accrues to the wheat-grower only when the price realised exceeds this amount.

A very interesting comparison may be made between the above estimate of the cost of producing wheat and the estimated actual return to farmers per acre in the six seasons to 1920-21.

The estimate of cost in each case is similar to that for unfallowed land above, but the average yield in each season is that for the whole State. A special allowance is, however, made for the cost of seed wheat, and it is assumed that the whole yield is sold. In this way it is hoped to show the financial results of the operations of an average wheat-grower cropping annually for grain an area of 230 acres and 20 acres for hay for horse-feed. The costs are those for cultivating unfallowed land since that is the more general mode of cultivation in the State.

Item.	1915-16,	1916-17.	1919-20.	1920-21.	1921-22.	1922-23.
	↑		↑			
Average yield per acre .. .. bushels	15.9	9.6	3.0	17.8	13.4	9.7
Costs—	£	£	£	£	£	£
Land—Int. rest .. ..	90	90	90	90	90	90
Plant—Interest and Depreciation .. ..	90	90	90	90	90	90
Repairs .. ..	15	15	20	20	20	20
Wages—Extra help .. ..	32	32	40	45	45	45
Fertiliser, 6½ tons .. ..	37	37	42	44	44	44
Bags .. ..	48	27.5	10	78	42.75	31
Cartage to rail .. ..	29	16.5	6	46.5	39	28
Seed Wheat—50 lb. per acre .. ..	62.5	62.5	62.5	104	104	78
Total cost of cropping 230 acres for grain £	403.5	370.5	360.5	517.5	474.75	426
Cost of crop per acre .. ..	£ s. d. 1 15 1	£ s. d. 1 12 3	£ s. d. 1 11 4	£ s. d. 2 5 0	£ s. d. 2 12 10	£ s. d. 1 17 0
* Value at rail of crop per acre .. ..	3 7 9	1 9 10	1 2 4	6 12 5	3 2 4	2 5 2½
Apparent Net Return to Farmer, including Payment for his labour { per acre	1 12 8	(—) 2 5	(—) 9 0	4 7 5	0 9 6	0 8 2½
{ 230 acres	£370	(—) £28	(—) £103	£1,005	£109	£94½

\* Estimated from payments of wheat pool. † Abnormal costs occasioned by drought are excluded in these years. (—) Loss. ‡ Subject to revision.

NOTE.--The average annual return, five seasons (1915-16 to 1919-20)...£75.  
 " " " seven " (1915-16 to 1921-22)...£181.

Although this statement is expressed in terms of money, it does not purport to furnish any guide to the amount of profit of individual farmers. It is hypothetical, and illustrates the combined effects of prices and seasons on the operations of wheat-farmers in recent years, and shows the causes of the decline in the industry since the record season 1915-16. Thus, while the returns of the season 1915-16 were high and those of 1920-21 remarkably high, the four intervening seasons were disastrous, failing in every case to repay the cost of production and to remunerate the farmer for his labour. That the decline was not greater in view of these poor returns is partly explained by the fact that the returns from wheat-hay have been considerable, and, in practice, this crop was grown to a limited extent along with wheat for grain. A fall in the price of wheat, and the adverse weather in 1922 have rendered the last two seasons unpropitious to wheat-growers. Many wheat farmers also raise sheep for market, and excellent prices ruled up to the last quarter of 1920. But the serious effect on those engaged in the industry is clear from the fact that 10,000 farmers, mostly wheat-growers, in straitened circumstances, sought Government assistance in 1920.

*Consumption of Wheat in N.S.W.*

Since the abolition of the system of interstate book-keeping by the Commonwealth Department of Customs in 1910, it has been difficult to obtain information as to the extent of wheat movements interstate, and thus it has

not been possible to estimate satisfactorily the consumption and export of wheat as regards New South Wales. Absolute accuracy, therefore, is not claimed for the estimates between 1910 and 1920 in the following table, but they are considered to be fairly reliable. Allowances for the carry-over between periods have not been made, but it is likely that these are considerable only in special circumstances. A close approximation to the net average annual consumption may be made by choosing a lengthy period beginning and terminating in years when the carry-over was nil or negligible. Such periods are adopted in the table shown below. For 1921 and 1922, particulars of stocks and of inter-state movements of wheat were collected specially.

As harvesting operations do not begin until November, and new wheat is not generally marketed until the end of the year, the consumption and export years have been made to coincide with the calendar years. The statement shows the yield, net exports, and apparent consumption per head in periods since 1892, flour being included at its equivalent in wheat.

Period.	Average Annual Crop.	Average net Annual Export.	Apparent Consumption per annum.			
			Including Seed Wheat.		Excluding Seed Wheat at 1 bushel per acre.	
			Total.	Per head.	Total.	Per head.
	thousand bushels.	thousand bushels.	thousand bushels.	bushels.	thousand bushels.	bushels.
1892-1896	5,904	(-)2,310	8,214	6·6	7,231	5·9
1897-1903	10,694	791	9,903	7·3	8,237	6·1
1904-1908	19,102	7,505	11,597	7·8	9,514	6·4
1909-1915	25,765	11,958†	13,807	7·9	10,395	5·9
1916-1920	31,523*	14,179†	17,344	8·8	13,688	6·9
1921	55,625	42,777	14,393‡	6·8	10,704	5·1
1922	42,767	24,700	17,600‡	8·1	13,600	6·4

\* Excludes "stock adjustments" of wheat pools; average, 503,000 bushels per year. † Partly estimated.  
‡ Allowing for stocks carried over. (—) Average net import.

The quantity of wheat used annually as flour for human consumption has varied from  $4\frac{3}{4}$  to  $5\frac{3}{4}$  bushels of wheat per head in the past five years. As the area under wheat grew steadily until 1915, a proportionate increase in the amount of grain required for seed purposes has largely increased the total requirements per head of population. The amount used for poultry and stock purposes is apparently very variable, being affected by seasonal conditions and by the conditions which govern export. It is probable that the quantity consumed in the period 1916-1920 was somewhat above normal requirements. Not only were large quantities used for sheep fodder in the unusually severe drought of 1919-20, but great difficulty was experienced in disposing of wheat abroad, so that large quantities remained in the country for lengthy periods.

Including seed wheat, the requirements for the period 1916-20 probably did not exceed 8 bushels per head of population, on which basis, since prices were generally low and supplies usually abundant, the maximum requirements for local consumption may be estimated at approximately 17,500,000 bushels annually, of which about 4,000,000 bushels (depending on the area sown) are used for seed purposes.

However, the effective demand for wheat for local consumption is very elastic. In special circumstances, such as those of the year 1921, when prices rose to phenomenal heights—wheat for local consumption being at 9s. per bushel for nearly the whole year—consumption decreased markedly,

being estimated at 14,400,000 bushels, or 6·8 bushels per head of population. The quantity of wheat exported overseas was nearly twice as great as in any previous year. Economy among consumers had its counterpart among producers, who were stimulated by high prices to realise on every available bushel. From the records of the Wheat Office it is ascertained that growers retained for their own use in 1921 only as much wheat as in 1920, when, as the yield was very low and the price very high, it may be assumed that all available wheat was marketed.

The extent to which economy in using wheat was practiced by growers in 1920 and 1921 was shown in the Year Book for 1921 at page 734.

The economy in human consumption of wheat as flour in New South Wales in the last four years has proceeded in two ways,—(a) in the actual quantity of flour consumed; (b) in the amount of flour manufactured from a bushel of wheat. These developments are apparent from the following table :—

Year.	Weight of Bushel of Wheat of fair average quality.	Average Amount of Flour manufactured from each bushel of wheat milled.	Amount of Flour consumed per head of population.	Amount of Wheat consumed as Flour.	
				Per head of population.	Total.
	lb.	lb.	lb.	bushels.	bushels.
1918-19	62·5	40·4	230	5·7	11,222,000
1919-20	61·0	41·2	223	5·4	11,009,000
1920-21	59·5	42·3	211	5·0	10,453,000
1921-22	61·0	42·2	203	4·8	10,216,000

In considering the relationship between the first two columns, it should be recollected that the average weight per bushel of wheat, shown in the first column, relates to the wheat grown in the season, such wheat not being available for milling until December; the returns of wheat-milling operations relate to the period July to June, and to a large extent therefore include particulars of wheat grown in the preceding season. Very little wheat grown in 1919-20 was available for milling. To some extent the wheat used for milling is selected.

It is apparent that the average amount of flour derived from the wheat milled has increased considerably, and that, at the same time, the consumption of wheat as flour has diminished very much. Despite a large increase in the population, the economy in the use of wheat so effected was very considerable.

#### *Grading, Handling, and Marketing Wheat.*

A large proportion of every successful harvest must be exported, so that the maintenance and further development of the wheat industry in New South Wales are dependent largely on world demand, and on the efficiency of the facilities for gaining access to over-sea markets on such conditions that it will pay farmers to grow wheat in preference to other products. The price of wheat for export is determined by world's parity, and it fluctuates with the world demand. The market for the exportable surplus of local wheat is found chiefly in Europe, but quantities of flour are sent to the countries and islands of the Pacific and Indian Oceans. In 1922 the equivalent of approximately 24,800,000 bushels of wheat was exported from New South Wales, and of this quantity about 3,000,000 bushels were sent to other Australian States, principally to Queensland. The further extension of the market for local wheat in Europe is in some measure affected by the

competition of great wheat-producing countries nearer the market—the United States, Canada, and the Argentine, which derive advantages from shorter distances and lower freights.

Australian wheat for export is marketed on the basis of a single standard known as f.a.q., or fair average quality. In New South Wales the standard is fixed annually by a committee of members of the Sydney Chamber of Commerce and of two Government representatives. Samples obtained from each of the wheat districts are weighed on McQuirk's patent scale, and an average struck, which is used as a standard in all wheat export transactions.

The following comparison shows the standard adopted in New South Wales for each of the past ten seasons, and the date on which it was fixed in each year :—

Year.	Date Fixed.	Standard Bushel.	Year.	Date Fixed.	Standard Bushel.
		lb.			lb.
1913-14	19th Jan., 1914	64	1918-19	30th Jan., 1919	62½
1914-15	15th Feb., 1915	60½	1919-20	6th Feb., 1920	61
1915-16	21st „, 1916	61	1920-21	10th Mar., 1921	59½
1916-17	12th Mar., 1917	56¾	1921-22	7th Feb., 1922	61
1917-18	26th Feb., 1918	58½	1922-23	25th Jan., 1923	61

Under the present system most of the wheat is bagged on the farm and brought to the nearest railway station, whence that intended for export is carried in bags by rail to Sydney for shipment. At some of the stations the Railway Department has erected sheds, and a small charge is made for storage, but portions of large harvests have at times to be stored with scant shelter. At Darling Harbour, Sydney, where all the grain ships, except bulk carriers, are loaded, sheds and bag elevators have been provided.

A system of bulk-handling has been provided for and is now partly in operation.

The complete scheme provides for the erection of elevators at seventy-one country centres, with a total storage capacity at one filling of 15,200,000 bushels and of a terminal elevator in Sydney with a total storage capacity of 6,509,600 bushels.

Elevators at twenty-eight country centres were put into operation during the 1920-21 season, and were again used in 1921-22. They comprised 109 storage bins capable of holding 5,450,000 bushels of grain. About 2,000,000 bushels were handled by this method in 1920-21, 4,335,000 bushels in 1921-22. In 1922-23 season twenty-nine completed plants and twenty-five plants with temporary facilities were available, with a storage capacity of 11,550,000 bushels. The country plants were operated through the New South Wales Voluntary Wheat Pool Committee Ltd., under an agreement entered into with the Government, a charge of 1½d. per bushel being made on all wheat received into the elevators. The fee for the combined service of receiving, storing, handling, and shipping in bulk, was 2¾d. per bushel. The total quantity of wheat handled in bulk from the 1922-23 harvest was 4,281,103 bushels.

The terminal elevator has been completed, and the storage space provided there is utilised for the storage and shipping of wheat in bulk.

The estimated cost of the works to 30th June, 1922, was £2,633,922.

For conveyance from country stations to the terminal, the Railway Commissioners converted a large number of 15-ton S trucks, and made them suitable for the carriage of grain in bulk. It has been decided to adopt as



the standard design for handling bulk grain a 20-ton truck with a hoppers bottom, so that it will be self-discharging; a number of these are under construction.

The question of bulk handling of wheat in New South Wales with special reference to the transition from bag handling, was the subject of careful inquiry by a Select Committee of the Legislative Council in November, 1920, and a report has been issued. An analysis of the findings of this committee appears in the Year Book for 1920.

### Wheat Freights.

In the conditions governing the marketing of local wheat abroad, the availableness and cost of freight are very important factors. Owing to the greater distances from local than from American ports to European markets, freight rates are much heavier on Australian than on American cargoes, though both must be sold at world's parity, or at approximately the same price, yielding a smaller net return to local growers.

A comparative statement is given below of the freights ruling for bagged-wheat cargoes carried by steam vessels from Sydney to London in pre-war and recent years:—

Year ended 30th June.		Freight.				Year ended 30th June.		Freight.			
		Per ton.		Equivalent per bushel.				Per ton.		Equivalent per bushel.	
		s. d.	s. d.	d.	d.			s. d.	s. d.	d.	d.
1912	...	17 6	to 30 0	6½	to 11	1920	...	114 0	to 143 0	41½	to 52
1913	..	10 0	to 35 0	3½	to 13½	1921	...	46 8	to 120 0	16¾	to 43½
1914	...	25 0	to 37 6	9	to 13¾	1922	...	35 0	to 46 8	12½	to 16¾

The average amount of ocean freight paid by the Voluntary Pool Committee on 12,966,147 bushels of 1921-22 wheat exported over-sea was 1s. 2¾d. per bushel.

The following comparative rates of freight ruling on 24th November, 1922, were extracted from the reports of the International Institute of Agriculture. A comparison of the rates of freight per bushel is added in order to show the disabilities under which Australian growers labour in comparison with growers in other countries, on account of their distance from world markets:—

Exporting Country.	Freight to United Kingdom.	
	Original Rates.	Rate per bushel.
Canada ... ..	4s. 0d. per 480 lb.	s. d. 0 6
United States (northern range)..	3s. 3d. per 480 lb.	0 5
Argentina (down river) ... ..	26s. 6d. per 2,240 lb.	0 8½
British India (Karachi) ... ..	27s. 6d. per 2,240 lb.	0 8½
Australia ... ..	47s. 6d. per 2,240 lb.	1 3¾

### Compulsory Wheat Pools, 1915-1920.

Particulars of the disposal of the harvests of the seasons 1915-16 to 1920-21 were published in the Official Year Book, 1921.

All wheat grown in New South Wales to the end of the 1920-21 season was disposed of by the end of 1921, but up to June, 1922, only the accounts of the 1915-16 pool had been completed, as the necessary information regarding oversea sales from later pools was not available.

The following statement, however, indicates the financial position on 31st March, 1923, and shows the magnitude of the transactions in each season :—

Season.	New South Wales.		
	Advances to Growers.	Expenses Paid.	Total Expenditure.
	£ (000)	£ (000)	£ (000)
1915-16	12,384	1,940	14,324
1916-17	5,003	1,952	6,955
1917-18	6,874	1,569	8,443
1918-19	3,161	610	3,771
1919-20	179	13	192
1920-21	19,140	1,971	21,111
All seasons..	46,741	8,055	54,796

At May, 1923, the position of the various pools was as follows :—That of 1915-16 had been completed and all accounts settled; those of 1916-17 and 1920-21 were known to be overpaid and awaited adjustment; and the accounts of those of 1917-18, 1918-19, and 1919-20 were awaiting completion, payments of 3d. per bushel in the 1917-18 and 1919-20 pools respectively having been made on 28th March, 1923.

#### *Voluntary Wheat Pool, 1921-22.*

On the decision of the Government not to continue the compulsory pool system of handling wheat harvests, a committee of farmers' representatives was formed in November, 1921, and a "voluntary pool" hastily organised. Arrangements were entered into whereby the Commonwealth Government agreed to advance 3s. per bushel to growers and 8d. to the pool for handling charges on all wheat received into the pool. The system of issuing negotiable certificates as receipts for wheat pooled by farmers was continued.

In all, 22,785,560 bushels of wheat (53·4 per cent. of the 1921-22 crop) were pooled by 12,264 growers. The total realisations on this wheat amounted to £6,179,027, and the net receipts by farmers at railway sidings to £5,298,812. Arrangements for a similar advance by the Commonwealth Government to farmers were made in connection with the 1922-23 and 1923-24 harvests. Of the 1922-23 harvest, 11,665,846 bushels were pooled, equivalent to 40·8 per cent. of the total crop.

#### *Receipts by Farmers from Pools.*

Although the amounts deducted to cover dockages for inferior wheat and rail freights produced some divergence in the actual returns to individual farmers, the following is an estimate of the average receipts per bushel by farmers for wheat pooled from the last seven harvests. The statement is compiled from the records of the various pools, that of 1921-22 being voluntary, the others Government compulsory pools :—

Season.	Total Amount Paid per bushel f.a.q. Wheat.	Average Deductions per bushel.			Amount per bushel received by Farmers at Railway Siding.
		Estimated Freight.	Dockage for Inferior Wheat.	All other Charges.	
	s. d.	d.	d.	d.	s. d.
1915-16	4 10	3·60	·05	3·25†	4 3·1
1916-17	3 3	†	1·63	†	3 1·4
1917-18	4 6	4·00	·67	†	4 1·3
1918-19	4 11	4·30	·01	†	4 6·7
1919-20	8 1	4·58	·11	†	7 8·3
1920-21	7 6	†	·69	†	7 5·3
1921-22*	5 5·17	5·40	·09	3·87	4 7·8

\* Voluntary Pool.

† Flat rate.

‡ Not deducted.

*Prices of Wheat.*

The following table gives the average prices per bushel ruling in the Sydney market in each year since 1898. The figures for earlier years, published in the Year Book for 1919, exhibit clearly the tendency towards a gradual reduction in the value of the cereal down to 1895, when the price was the lowest of the series. In 1896, however, owing to a decrease in the world's supplies, the price rose considerably, and led to an extension of cultivation in Australasia. In the early years, when local production was deficient, the price in Sydney was generally governed by the prices obtained in the markets of Australian States where a surplus had been produced. Since the development of the export trade, however, it has been determined by the price realised in London, which is usually equal to that ruling in Sydney, plus freight and charges; but from 1915 to the close of 1921 local prices were fixed by the Government.

The prices quoted are for an imperial bushel of 60 lb. in Sydney markets.

Year.	February.	March.	Average Value for Year.	Year.	February.	March.	Average Value for Year.
	per bushel.	per bushel.	per bushel.		per bushel.	per bushel.	per bushel.
	s. d.	s. d.	s. d.		s. d.	s. d.	s. d.
1898	4 0	4 0	3 8	1911	3 7 $\frac{3}{4}$	3 5	3 6
1899	2 7 $\frac{1}{2}$	2 9	2 9	1912	3 9 $\frac{1}{4}$	3 8 $\frac{1}{2}$	4 1
1900	2 9	2 8	2 8 $\frac{1}{2}$	1913	3 6 $\frac{1}{2}$	3 7	3 2 $\frac{1}{2}$
1901	2 7	2 7	2 8	1914	3 8	3 9 $\frac{1}{4}$	4 1 $\frac{1}{2}$
1902	3 2	3 2 $\frac{3}{4}$	4 5	1915†	5 6	5 6	5 5
1903	5 11 $\frac{5}{8}$ *	5 9 $\frac{1}{4}$ *	5 1 $\frac{3}{4}$ *	1916†	5 1 $\frac{3}{4}$	5 0 $\frac{1}{4}$	4 10
1904	3 0 $\frac{1}{2}$	3 0 $\frac{3}{4}$	3 2	1917†	4 9	4 9	4 9
1905	3 4 $\frac{1}{2}$	3 3 $\frac{3}{8}$	3 5	1918†	4 9	4 9	4 9
1906	3 1 $\frac{5}{8}$	3 2 $\frac{1}{4}$	3 3 $\frac{1}{2}$	1919†	5 0	5 0	5 1 $\frac{1}{2}$
1907	3 0 $\frac{7}{8}$	3 1 $\frac{1}{2}$	3 10	1920†	8 5*	8 10*	8 7 $\frac{1}{4}$ *
1908	4 4	4 5 $\frac{1}{2}$	4 3 $\frac{1}{2}$	1921†	9 0	9 0	8 8
1909	4 0 $\frac{3}{4}$	4 6 $\frac{1}{2}$	4 9	1922†	5 2	5 11	5 8
1910	4 1 $\frac{3}{4}$	4 1	3 10	1923†	5 8	5 7	5 8 $\frac{3}{8}$

\* Imported wheat.

† Officially fixed.

‡ Price on trucks of wheat for flour for home consumption.

§ To June.

The high prices ruling in 1903 and 1920 were due to the almost entire failure of the previous season's crop, on account of which supplies were drawn from oversea and other States. In 1920 the price of 9s. per bushel was fixed for wheat for local consumption in accordance with the anticipated world's parity and in order to encourage farmers to continue wheat-growing. This price was maintained until the end of November, 1921.

An interesting comparison between the prices realised for wheat by the growers of three important exporting countries and one important consuming country is made in the following table :—

Crop Grown in—	Average Farm Value per Bushel of Wheat.			
	United Kingdom.	United States.	Canada.	New South Wales.†
	s. d.	s. d.	s. d.	s. d.
1914	4 0	3 8	...	5 5
1915	6 2	4 4	3 9	4 3
1916	6 7	5 3	5 5	3 1
1917	9 3	8 4	8 1	3 10
1918	9 0	8 6	8 5	4 7
1919	9 1	8 10	7 10	7 5
1920	9 5	9 1	6 9	7 5
1921	8 3	4 8	3 4	4 8
1922	*	4 5	3 6	4 8†

\* Not available. † Preliminary, subject to revision. ‡ Crops in N.S.W. are marketed six months later than in countries of Northern Hemisphere.

The above averages have been taken from official publications of each country mentioned. Dollars have been converted at par rate of exchange, in the cases of United States and Canada. The marked disparity between the values in Canada and the United States since 1919 has been largely due to the abnormal conditions of the exchanges.

It is evident that, although in the early years of the war prices of wheat rose precipitately abroad and furnished excellent returns to farmers, local conditions were not favourable to such an increase. The price for local consumption was fixed at a point considerably below the price in world markets and, although a large exportable surplus was produced in 1915–16 and subsequent years, the scarcity of shipping made it impossible to realise promptly or at favourable rates, with the result that the returns to farmers were low and were paid in small sums intermittently. It was not until the scarcity caused by the bad seasons of 1919 that the price paid to the farmer in New South Wales rose to a level approaching that of other countries. A minimum price of 7s. 6d. per bushel was guaranteed by the Government for the 1920 crop in order to stimulate production.

According to a press report of 4th August, 1922, the Parliamentary Secretary to the British Board of Trade stated recently in the House of Commons that the average price of Australian wheat purchased by the Imperial Government during 1916–17 and 1919–20 was 5s. 2d, per bushel f.o.b. Australia, while the average price of wheat purchased elsewhere in the same periods was 9s. 3d. f.o.b. country of origin. Part of this disparity was due to the incidence of high rates of ocean freights and insurance.

#### *World's Production of Wheat.*

Complete and uniform statistics of the whole of the wheat crops of the world in recent years are not available, and have been very defective in many countries since 1916. But for previous years returns were obtainable from nearly every country where wheat was grown extensively. From these reliable estimates of the fluctuations of the world's wheat production may be made. In the past thirty years a continuous increase has been apparent, despite the fact that very considerable fluctuations have been shown from season to season. The annual averages, so far as reported, from 1891 to 1915 are shown below :—

Period.	Annual average Wheat Yield of World. Bushels.
1891–1900 ... ..	2,581,000,000
1901–1910 ... ..	3,553,000,000
1911–1915 ... ..	3,837,000,000

The returns from which these totals are compiled do not include all wheat-producing countries. It is estimated by the International Institute of Agriculture that the average annual yield of wheat throughout the world is now approximately 4,600,000,000 bushels.

An indication of the condition of the world's post-war production of wheat is made in the following table of production in pre-war years compared with 1921.

Country.	* Annual Production of Wheat in Thousand Bushels.			Country.	* Annual Production of Wheat in Thousand Bushels.		
	Average 1909-13.	1921.	1922†.		Average 1909-13.	1921.	1922†.
Europe—				America—			
Russia proper ..	(b) 522,794	(a)	(a)	United States ..	686,691	794,893	586,204
France ..	(b) 317,254	322,767	235,370	Canada ..	197,119	300,857	391,425
Italy ..	183,260	188,126	160,570	Argentina ..	157,347	169,756	215,362
Spain ..	130,446	143,205	125,924	Chile ..	20,316	25,180	(a)
Germany ..	(b) 152,119	97,864	69,656	Minor Countries ..	17,809	(a)	(a)
Roumania ..	(b) 86,679	76,977	87,752				
United Kingdom ..	61,481	73,800	63,712†	Total, America ..	1,078,782	..	..
Hungary ..	(b) 156,523	47,087	45,074				
Bulgaria ..	(b) 43,725	42,510	34,343	Australasia—			
Czechoslovakia ..	..	40,673	30,472	Victoria ..	27,656	43,867	35,697
Poland ..	(b) 23,343	35,576	42,274	New South Wales ..	26,717	42,767	28,594
Belgium ..	14,583	11,523	9,870	South Australia ..	22,843	24,947	28,775
Austria ..	(b) 61,075	6,452	7,148	Western Australia ..	5,671	13,905	14,043
Serbia ..	(b) 14,775	51,636	42,248	Queensland ..	1,250	3,026	1,901
Minor Countries ..	33,047	37,878	(a)	Tasmania ..	806	577	450
Total, Europe ..	1,806,104	..	..	Total, Australia ..	84,943	129,089	109,460
Asia—							
British India ..	350,736	250,469	366,352	New Zealand ..	7,885	10,565	(a)
Minor Countries (b)	167,743	(a)	(a)	Total, Australasia ..	92,328	139,654	..
Total, Asia ..	518,479	..	..	Grand Total ..	3,573,947	..	..
Africa—							
Algeria ..	33,071	41,480	18,233				
Egypt ..	34,000	37,011	36,648				
Morocco, French ..	..	17,466	9,553				
Tunis ..	6,063	8,818	3,674				
Union of South Africa ..	4,620	8,113	9,345				
Total, Africa ..	77,754	112,888	77,453				

(a) Not available. (b) Old boundaries. † Preliminary. ‡ Excluding Ireland.  
 \* Information from Year Book (1921) of the United States Department of Agriculture, and International Institute of Agriculture.

### MAIZE.

Before the development of the wheat-exporting industry of New South Wales maize-growing was the most extensive single agricultural pursuit. It now ranks second in importance amongst the crops of New South Wales. Its cultivation is small in comparison with that of wheat, and sufficient is not grown for local consumption.

Maize is cultivated chiefly in the valleys of the coastal rivers, where both soil and climate are peculiarly adapted to its growth. On the Northern Tableland also good results are obtained, and maize is gaining popularity as a profitable crop in rotation with hay.

Maize-growing reached its highest development locally in 1910, and since then, despite a distinct rise in the price level, production has been decreasing. The following statement exhibits a comparison of maize-growing since the season 1900-1, with the average price in Sydney markets for each crop:—

Season.	Area under Maize for Grain.	Production.		Average Price per Bushel, Sydney Markets.
		Total.	Average yield per Acre.	
	acres.	thousand bushels.	bushels.	s. d.
1900-1	206,051	6,293	30·5	2 8
1910-11	213,217	7,594	35·6	3 0
1915-16	154,130	3,774	24·5	4 6
1916-17	153,378	4,333	27·9	3 10
1917-18	145,754	3,500	24·0	5 7
1918-19	114,582	2,092	18·3	8 0
1919-20	136,509	4,052	29·7	8 7
1920-21	144,105	4,176	29·0	5 4
1921-22	146,687	3,976	27·1	5 5

It is somewhat difficult to understand why maize-culture has declined so considerably in New South Wales, and why, so far from there being any export trade in this important grain, supplies have been regularly imported. Perhaps among the reasons may be included the competition of more profitable pursuits, such as dairy-farming, the absence of an outlet in the form of an export trade, and the vagaries of the local market. In pre-war years the international trade in maize was somewhat less than half the volume of that for wheat. In the United States of America, where approximately 70 per cent. of the world's supply of maize is grown, it is by far the largest crop, but only about 2 per cent. of it is exported. The pre-war consumption in England was approximately eighty million bushels annually, imported principally from the United States and the Argentine.

Particulars of the cost of production in these countries are not available, but in the last three years the gross returns to growers in New South Wales have been far greater than in the United States. The estimated average farm value of maize per acre in the 1921 growing season was £2 11s. 8d. in the United States, and £6 1s. 11d. in New South Wales.

The following statement shows the area under maize for grain in New South Wales during the season 1921-22, with the production and average yield in each Division:—

Division.	Area under Maize for Grain.	Yield.	
	Total.	Total.	Per Acre.
Coastal—	acres.	bushels.	bushels.
North ... ..	46,476	1,353,502	29·1
Hunter and Manning ... ..	31,171	934,914	30·0
Cumberland ... ..	3,605	174,378	48·4
South ... ..	10,246	390,270	38·1
Total ... ..	91,498	2,853,064	31·2
Tableland—			
Northern ... ..	20,057	307,683	15·3
Central ... ..	8,103	231,633	28·5
Southern ... ..	630	11,088	17·6
Total ... ..	28,790	550,404	19·1
Western Slopes... ..	25,916	561,483	21·6
Central Plains, Riverina, and Western Divisions ... ..	483	11,349	23·5
All Divisions ... ..	146,687	3,976,300	27·1

During the ten years ended 1909, the average annual consumption of maize in New South Wales was 4·1 bushels per head of population. Of late years, however, the production of maize has declined, and to maintain the consumption of earlier years an average annual import of about five million bushels would be necessary now. The average annual maize crop during the past five seasons has been 3,559,000 bushels. Since 1921, returns of interstate movements of maize have been collected. The net import into New South Wales in 1921 was 886,400 bushels, and 743,000 bushels in 1922, almost entirely from Queensland. It is apparent that a very great decline in consumption has taken place, the average per head of population being less than 2½ bushels. The total consumption in 1921 was 5,060,000 bushels and 4,720,000 in 1922.

#### OATS.

The production of oats in New South Wales is not sufficient to supply the local demand, although where cultivation has been undertaken the return

has been satisfactory. The elevated districts of Monaro, Argyle, Bathurst, and New England contain large areas of land on which oats could be cultivated with excellent results, as it thrives best in regions which experience a winter of some severity.

Omitting from account a small area in the Hunter and Manning Division, the highest average yield in 1921-22 (20·5 bushels per acre) was obtained from 1,545 acres in the Central Plains Division. In the whole of the Tableland Division 12,791 acres were under crop, and yielded 203,904 bushels, or 15·9 bushels per acre; on the Western Slopes, 25,752 acres gave 424,767 bushels, or 16·5 bushels per acre, while in the Riverina the production was 506,819 bushels from 29,571 acres, or 17·1 bushels per acre. These three Divisions accounted for about 97·6 per cent. of the total production.

The following table gives statistics of the cultivation of oats for grain since 1900-1 :—

Season.	Acres under Oats for Grain.	Production.		Price per Bushel, Sydney Markets.
		Bushels.	Bushels per Acre.	
1900-01	29,383	593,548	20·2	s. d. 2 4
1910-11	77,991	1,702,706	21·8	2 8
1915-16	58,636	1,345,698	23·0	2 10½
1916-17	67,111	1,084,980	16·2	3 1
1917-18	82,591	1,455,111	17·6	4 7
1918-19	86,474	1,273,752	14·7	5 9
1919-20	76,117	586,758	7·7	5 7
1920-21	77,709	1,642,700	21·1	4 0½
1921-22	69,795	1,169,900	16·8	4 2

The cultivation of oats for grain developed rapidly in New South Wales until 1913, but has since declined. The area and yield have always been of small extent, local needs being supplied largely by importation from neighbouring States. Considerable areas, however, are sown with oats for hay and valuable crops produced. (See page 518.)

The local yield per acre is considerably below that of the important producing countries, and the total yield insignificant compared with the world production, which usually amounts to more than 4,000,000,000 bushels per year. Though most countries produce sufficient for their own requirements, considerable international trade is done in oats. The United Kingdom and France are the principal importers and Russia (formerly), but now the United States, Canada, and the Argentine are the principal world suppliers.

The return from the crop to growers in Canada and the United States may be gauged from the fact that, at farm prices, one acre of oats in the former country was, on the average (1915-19), worth £4 17s. 10d., and in the latter (1914-20) £3 16s. 6d., compared with an average of £2 11s. (1910-19) in New South Wales.

Until an accurate soil survey of the State is made it will not be possible to estimate the extent of the possible expansion of oat-growing in New South Wales.

In the period 1900-09 the average consumption of oats was at the rate of 1·4 bushels per head of population. If this relationship still existed local requirements would now be, on the average, about 2¾ million bushels annually. It is estimated that the consumption of oats in New South Wales was 2,535,000 bushels in 1921, and 2,108,000 bushels in 1922. In 1921, 892,300 bushels were imported, and 939,000 bushels in 1922.

At present the market for oats is chiefly in the metropolitan district, and the demand depends mainly on the price of maize.

## BARLEY.

Barley is produced only on a moderate scale, and local supplies of barley and malt are practically all imported. Although there are several districts where the necessary conditions as to soil and drainage present inducements for cultivation, particularly with regard to the malting varieties, barley is grown mainly in the North-Western Slope and the Riverina Divisions. The areas under crop in other districts are small, and do not call for special notice. The following table shows the area under barley for grain, together with the production at intervals since 1900-01.

Season.	Area under Barley for Grain.	Production.		Season.	Area under Barley for Grain.	Production.	
		Total.	Average per Acre.			Total.	Average per Acre.
	acres.	bushels.	bushels.		acres.	bushels.	bushels.
1900-01	9,435	114,228	12.1	1917-18	6,370	97,824	15.5
1905-06	9,519	111,266	11.7	1918-19	7,980	86,313	10.8
1910-11	7,082	82,005	11.6	1919-20	5,354	38,892	7.2
1915-16	6,369	114,846	18.0	1920-21	5,969	123,290	20.7
1916-17	5,195	73,370	14.1	1921-22	5,031	83,950	16.7

The table shows considerable fluctuation as to the area cultivated, while the grain yield has varied greatly, ranging from 4 bushels per acre in 1902-3, when the crop practically failed, to the excellent rate of 21.9 bushels in 1886-7. The average crop during the last ten years has been about 15 bushels per acre.

## OTHER CROPS.

Particulars are shown below of the remaining crops of the State:—

Crop.	Average of 5 years ending 30th June, 1921.			Year ended 30th June, 1922.		
	Area.	Production.	Yield per acre.	Area.	Production.	Yield per acre.
Hay—	acres.	tons.	tons.	acres.	tons.	tons.
Wheaten ... ..	583,931	598,450	1.02	467,363	575,084	1.23
Oaten ... ..	173,157	208,848	1.21	203,919	270,195	1.33
Lucerne ... ..	58,049	123,781	2.13	77,577	181,802	2.34
Other ... ..	2,224	2,346	1.05	2,069	2,043	0.99
		£			£	
Green Fodder ... ..	350,606	499,137	£1 8s.	128,965	477,188	£3 14s.
Sown Grasses ... ..	1,508,947	...	...	2,005,515	...	...
		bushels.	bushels.		bushels.	bushels.
Rye (Grain) ... ..	1,658	21,041	12.7	1,152	15,320	13.3
Broom Millet—						
Grain ... ..	2,466	11,652	4.73	1,230	14,874	12.1
Fibre ... ..		11,354	4.6		8,638	7.0
Root Crops—		tons.	tons.		tons.	tons.
Potatoes ... ..	22,723	47,776	2.10	29,494	57,835	1.96
Other ... ..	1,092	4,372	4.00	1,291	3,694	2.86
Miscellaneous Crops—		cwt.	cwt.		cwt.	cwt.
Tobacco (Dried Leaf)	1,210	10,293	8.5	1,164	8,386	7.2
Sugar Cane—		tons.	tons.		tons.	tons.
Crushed ... ..	5,145	129,261	25.12	5,400	149,474	27.65
Stand-over ... ..	5,656	...	...	7,380	...	...
Grapes—						
For Wine ... ..	4,013	4,804	1.20	4,818	5,637	1.17
		gallons.	gallons.		gallons.	gallons.
Wine Made ... ..	...	623,002	155	...	627,105	130
		tons.	tons.		tons.	tons.
For Table Use ... ..	2,127	2,335	1.10	2,137	2,914	1.36
		cwt.	cwt.		cwt.	cwt.
For Drying Purposes	605	6,868	11.35	789	10,885	13.80
Young Vines... ..	2,397	...	...	4,839	...	...
		£			£	
*Other Crops ... ..	14,681	626,906	£42 14s.	15,966	895,497	£56 2s.

\* Made up of Market Gardens, Tomatoes, Peas and Beans (dry), Pumpkins and Melons. Cabbages, Cauliflowers, Asparagus, Cucumbers, Experimental Plots, Lucerne Seed, Nurseries and Flowers.



Fodder crops are always extensive, but the areas cut for hay or used as green fodder, vary considerably from season to season. The greater part of the area cultivated for hay is sown with wheat, but cultivation for oaten hay is also very extensive. Lucerne is more or less a permanent crop, and in recent years the area devoted to it has increased steadily. The area of land cultivated expressly for green fodder is not available. The area shown above, including such lands in addition to the areas which failed to mature for grain or hay, and were used as green fodder for stock. Lands sown with grasses are not usually cultivated, being used principally for grazing dairy cattle on the North Coast.

Potatoes are a staple article of diet in New South Wales, but proportions ranging from one-third to two-thirds of the local requirements have to be imported regularly from other States, principally Tasmania and Victoria. From 1919 to 1921 prices were very high, and consumption declined very rapidly. The local production in 1921-22 was about 60 per cent. of requirements.

Only about 10 per cent. of the tobacco and about 7 per cent. of the sugar used annually in New South Wales are grown within the State.

The vineyards of the State are not large, but new areas of considerable extent are being placed under grapes in the Murrumbidgee Irrigation Area. The most important viticultural district is in the Hunter and Manning Division. Full details of the various crops summarised above are published in the Statistical Register of New South Wales.

#### ENSILAGE.

New South Wales is liable at intervals of fairly regular recurrence to long periods of dry weather. It consequently lacks a permanent supply of natural fodder, and the necessity arises for conserving the abundant growth of herbage of good seasons, in the form of ensilage, for use when natural pastures are exhausted. The need is well illustrated by recent experiences. In the latter part of 1919 and the first half of 1920 a severe drought caused heavy losses of sheep and farm stock. Extensive Government aid was given to many distressed farmers, and large sums of money were expended in purchasing fodder from other States at high prices. The breaking of the drought was followed by a prolific growth of grass, of which but a small part could be consumed. If the remainder had been conserved scientifically, a vast store of inexpensive fodder would be available for future needs. To facilitate such conservation the Department of Agriculture offers liberal assistance to farmers by erecting for them silos at actual cost, repayable by easy instalments without interest. Farmers may sink pits for the same purpose at small expense. In either case free advice on all matters of material and method is given by the Department.

The possession of stocks of ensilage is highly advantageous to the prosecution of dairy farming in the districts of the coast, where the climatic conditions are unfavourable to the growth of winter fodder.

The quantity of ensilage of which returns have been supplied is shown in the following table:—

Division.	Ensilage Prepared.					
	1900-01.	1905-06.	1910-11.	1915-16.	1920-21.	1921-22.
	tons.	tons.	tons.	tons.	tons.	tons.
Coastal ... ..	1,694	1,414	18,125	7,028	7,830	11,439
Tableland ... ..	3,753	1,430	2,328	800	967	1,349
Western Slopes ... ..	847	2,250	2,654	5,788	3,106	4,280
Central Plains and Riverina ... ..	460	4,227	6,409	4,595	3,730	7,009
Western ... ..	100	...	100	300	...	97
Total ... ..	6,854	9,321	29,616	18,511	15,633	24,174

The quantity of ensilage made each year during the last decade has varied considerably, especially during the first half of the period. The year of maximum production was 1909, when 34,847 tons were made on 364 farms. The production has since decreased considerably. In 1921-22 the production was 24,174 tons, made on 166 farms, and valued at £40,405.

Considering the liability of the State to periods of severe drought, the small efforts made to conserve the fodder of abundant seasons are disappointing. As a means of conserving fodder, the making of ensilage is of great potential value. Schemes of fodder conservation as insurance against drought have been considered from time to time, but no project has yet been initiated.

#### ORCHARDS.

In 1921-22 the area of land on which fruit (including grapes, bananas, and pineapples) was grown was 88,338 acres, and the value of fruit produced £1,468,070.

The cultivation of fruit is capable of considerable expansion. Both the soil and the climate of large areas throughout the State are well adapted to fruit-growing. A larger area of land is, however, being brought each year under fruit culture, and orchardists may obtain from the Department of Agriculture information as to the varieties which are recommended for planting in specified districts, and the prospects of ultimate success are thus greatly enhanced. With large areas of suitable soil and with climatic conditions ranging from comparative cold on the highlands to semi-tropical heat on the North Coast, a large variety of fruits can be cultivated. In the vicinity of Sydney, oranges, peaches, plums, and passion-fruit are most generally planted. On the Tableland, apples, pears, apricots, and all the fruits from cool and temperate climates thrive well; in the west and in the south-west, figs, almonds, and raisin-grapes can be cultivated; and in the north coastal districts, bananas, pine-apples, and other tropical fruits grow excellently. Citrus fruits are cultivated extensively, and form the largest element in local production.

Particulars of citrus orchards are shown in the following statement:—

Season.	Area under Cultivation (Citrus Fruits.)			Production.		Value of Production.*	
	Productive.	Not bearing.	Total.	Total.	Average per Acre.	Total.	Average per Acre.
	acres.	acres.	acres.	bushels.	bushels.	£	£ s. d.
1900-01	11,013	3,952	14,965	648,628	59	81,080	7 7 3
1910-11	17,465	2,643	20,108	1,478,306	85	199,300	11 8 3
1917-18	19,133	6,311	25,444	1,737,107	91	384,660	20 2 1
1918-19	20,529	7,068	27,597	1,619,346	79	745,070	36 5 10
1919-20	21,523	7,204	28,727	1,769,038	82	534,530	24 16 8
1920-21	21,990	6,445	28,435	2,009,756	91	477,580	21 14 4
1921-22	22,083	6,221	28,304	2,135,693	97	530,380	24 0 4

\* On farms.

Both the average yield per acre and the average value of the yield have increased very markedly. The value of citrus fruits per acre has been greater in the past five years than the value of other fruits.

The number of orchards in which citrus fruit was cultivated during the year 1921-22 was 6,248, and of these the average area was 4·5 acres.

The production of oranges and mandarins has attained such proportions that the growers are obliged to seek oversea markets, the supply, both in New South Wales and in the adjacent States, exceeding in some seasons the local demand. During 1921-22 the export of citrus fruits from New South Wales amounted to 46,868 centals, valued at £61,226, practically all of which went to New Zealand.

The following table shows the area under orchards and fruit-gardens exclusive of citrus orchards, bananas and pineapples, together with the total value of each season's yield, at intervals since 1900-01 :—

Season.	Area under Cultivation (Fruits other than Citrus).			Value of Production.	
	Productive.	Not Bearing.	Total.	Total.	Average per Acre.
	acres.	acres.	acres.	£	£ s. d.
1900-01	25,766	5,503	31,269	270,081	10 10 0
1910-11	20,498	6,748	27,246	271,930	13 5 4
1917-18	22,121	13,784	35,905	378,552	17 2 3
1918-19	23,795	12,970	36,765	586,470	24 12 11
1919-20	25,688	13,978	39,666	557,130	21 13 9
1920-21	27,368	14,309	41,677	578,980	21 3 1
1921-22	27,858	14,085	41,943	550,280	19 15 1

Approximately one-fifth of the area devoted to fruit culture is in the county of Cumberland. At the Murrumbidgee irrigation settlement fruit-trees are being planted very extensively, especially peaches, apricots, and oranges.\*

With the exception of oranges and mandarins, the fruit-production of New South Wales is far below average demands. In 1921-22 the quantity of fruit imported at Sydney by sea from other States was 1,385,965 cases, valued at £456,642, the greater proportion of which could be grown within New South Wales. The value of fruit used for jam and fruit-canning in New South Wales in 1921-22 was £157,352. Good seasons are rewarded by a glut of fruit, for which, apparently, there is no system of efficient handling; and while consumers are anxious to secure supplies of sound fruit, much of the produce is allowed to be wasted. The condition of the industry was investigated by the Select Committee on Agriculture in 1921, and much valuable information is contained in the report of that committee and the evidence taken by it.

\*See pages 527 and 528.

The extent of cultivation of each important class of fruit is shown in the following table for the past two seasons:—

Fruit.	1920-21.			1921-22.		
	Number of Trees not yet Bearing.	Trees of Bearing Age.		Number of Trees not yet Bearing.	Trees of Bearing Age.	
		Number.	Yield.		Number.	Yield.
Oranges—			bushels.			bushels.
Seville ... ..	35,202	83,784	84,379	24,581	79,462	78,212
Washington Navel ...	139,381	258,703	261,916	145,606	272,395	281,803
Valencia ... ..	154,774	344,665	321,156	144,226	357,217	379,312
All other ... ..	106,073	564,588	574,832	82,645	547,476	596,301
Lemons ... ..	86,268	241,325	279,023	60,968	217,387	303,356
Mandarins ... ..	74,289	462,762	474,283	103,963	432,033	486,001
Other Citrus ... ..	2,333	11,702	14,167	3,625	9,648	10,708
Apples ... ..	394,208	749,569	891,345	387,282	774,365	528,712
Pears—						
Williams ... ..	106,361	161,511	169,663	89,281	169,211	139,767
All other ... ..	50,175	64,709	65,008	62,328	75,058	65,168
Peaches—						
Early ... ..	121,925	477,110	476,446	82,991	457,519	439,519
Canning ... ..	93,415	216,434	279,336	95,896	225,362	275,632
Nectarines ... ..	12,013	34,230	34,097	10,310	31,269	27,548
Plums ... ..	98,742	159,796	167,807	95,794	165,402	156,693
Prunes ... ..	216,215	50,165	43,464	253,523	66,675	61,497
Cherries ... ..	92,362	145,334	65,145	90,711	165,670	66,796
Apricots ... ..	53,068	108,776	118,745	52,571	106,053	112,866
Quinces ... ..	10,817	23,531	32,482	9,820	22,681	30,963
Persimmons ... ..	3,583	11,640	13,150	1,968	8,579	9,391
Passion Fruit ... ..	*34,624	*80,231	34,819	*52,972	*101,960	39,246
†All other ... ..	...	...	17,107	...	...	18,404

\* Vines.

† Excludes bananas and pineapples.

The above figures include returns from private orchards, which are, however, of comparatively small extent, ranging from 2 per cent. of the total orchards, in the case of citrus fruits, up to about 8 per cent. in the case of some stone-fruits.

Banana culture is an important industry in the Tweed River district of the North Coast division, but it is seriously menaced by a disease known as "bunchy top." In 1921-1922 the total area cultivated for bananas was 5,468 acres, a decrease of 282 acres since the preceding season; 4,570 acres were productive and yielded 433,533 cases of bananas, valued at £260,120, an increase of 98,205 cases and £44,340 respectively over 1920-21.

## WATER CONSERVATION AND IRRIGATION.

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The smallness and intermittency of the rainfall and the high evaporation over a wide area of New South Wales necessitates and at the same time restricts the work of conserving water for agricultural and pastoral purposes. On page 14 it is shown that approximately 78,250,000 acres of land in the western parts of the State—comprising nearly 40 per cent. of its total area—receives an average annual rainfall of 15 inches or less. The possibilities of irrigation over this wide area are still further limited (except in the extreme south) by the lack of large permanent streams of water. For this reason not only agricultural but also pastoral activities are restricted on these lands, which embrace mostly the plains of the Western Division.

Adjoining these on the east is a strip of territory from about 50 to 150 miles in width, stretching through the whole length of the Central Plains and Riverina, and containing approximately 37,000,000 acres of land (18·6 per cent. of the area of the State) which receives on the average from 15 to 20 inches of rain per year. It is principally in this region, in more favoured districts, further east, and in the Murray Valley to the south, that irrigation schemes, have been put forward to supplement the deficient rainfall.

Across the northern and north-western hinterland there stretches an artesian water basin of 53,000,000 acres, and in the south-western corner there exists a sub-artesian basin rather smaller in extent. Artesian bores and wells have made this water available at a considerable number of places.

The relation of rainfall to productivity in the various districts of the State is discussed further in part "Rural Settlement" of the present issue.

### *Policy and Control.*

The initiation of successful irrigation projects necessitates exhaustive preliminary investigations, frequently over long periods, into the amount of rainfall, evaporation, river flow, seepage, &c., as well as the making of contour surveys and investigations by boring and the compilation of records.

The successful conduct of schemes involves constructional work of all kinds, provision and control of settlements, of community services, of factories for handling products, of finance and other important matters. The whole of these functions have been entrusted to the Water Conservation and Irrigation Commission, consisting of three members, including the Minister for Agriculture. This Commission controls the whole of the waterworks of the State (other than town and domestic supplies), except the storage works under construction in connection with the Murray River, which are supervised by an Interstate Commission, upon which a member of the New South Wales Commission sits.

Private waterworks are controlled for the most part under the Water Act, 1912, which consolidates the Acts relating to water rights, water and drainage, drainage promotion, and artesian wells. Part II of the Act vests in the Crown the right to the use, flow, and control of the water in all rivers and lakes which flow through or past or are situated within the land of two or more occupiers. Private rights were abolished, and a system of licenses was established for the protection of private works, of water conservation, irrigation, and drainage, and the prevention of inundation of land.

*Expenditure on Water Conservation and Irrigation Projects.*

The expenditure by the State during 1921-22 on water conservation and irrigation projects and on administration and advances to settlers on irrigation areas is shown below :—

Heading.	Expenditure.*	Receipts, Repayments by Settlers, &c.	Net Expenditure.*
	£	£	£
General Loan Account—			
Burrinjuck Dam and Murrumbidgee Irrigation Areas ...	196,268	87,593	108,675
Returned Soldiers' Settlement..	726,739	58,321	668,418
Curlwaa Irrigation Area ...	2,329	...	2,329
Deep Boring ... ..	2,879	234	2,645
Shallow Boring ... ..	56,927	27,023	29,904
Total ... ..	985,142	173,171	811,971
Consolidated Revenue Fund—			
Salaries, Contingencies, &c. ...	67,404	...	67,404
Works, Investigation, Advances, &c. ... ..	13,582	...	1,747
Rents, Water Rates, Interest, and Repayments ... ..	...	11,835	...
Total ... ..	80,986	11,835	69,151
Public Works Fund—			
Wentworth Irrigation Area ...	2,115	...	2,115
Grand total ... ..	1,068,243	185,006	883,237

\* Including advances to settlers.

In addition, New South Wales contributed a sum of £137,209 in 1921-22 for expenditure in connection with the River Murray Scheme, making a total net expenditure for the year of £1,020,446. A considerable proportion of this amount consisted of advances to settlers.

It is not possible to state the total amount of capital expenditure by the Government of New South Wales on irrigation, and all water conservation projects for farming purposes (as distinct from town supplies), but the following are particulars of certain items of expenditure to 30th June, 1922 :—

Works.	Gross capital expenditure.
	£
Burrinjuck Dam and Murrumbidgee Irrigation Areas* ... ..	6,879,976
Hume Reservoir and Murray River ... ..	303,694
Hay Irrigation Area, 1912-1922 ... ..	6,961
Wentworth Irrigation Area (Curlwaa) ... ..	39,646
Deep Boring†... ..	713,587
Shallow Boring ... ..	187,365
Weirs, &c., for Water Trusts ... ..	38,593
Weirs, Cuttings, &c. (National Works) ... ..	169,602
Total ... ..	8,339,424

This statement is incomplete as it omits from account certain expenditure on investigations.

\* Including £1 151,651 outstanding advances to settlers.

† Including bores which failed.

## IRRIGATION SETTLEMENTS.

*The Murrumbidgee Irrigation Areas.*

A large storage dam, capable of holding 771,640 acre-feet of water, has been constructed at the head of the Murrumbidgee River, to retain the flood waters, which are released for use 250 miles lower down the river on the extensive irrigation areas of Yanco and Mirrool. A movable diversion weir has been provided about 240 miles below the dam, to turn the required amount of water from the river into the main canal leading to the irrigation settlements. Particulars of the extent of the dam were published in the Year Book, 1921.

At 30th June, 1922, there were under occupation for irrigation 1,781 farms, covering a total area of 108,241 acres, or more than one-fourth of the total area to be embraced in the completed scheme. It is proposed to make available an additional 2,700 farms within the next five years by the expenditure of £500,000 per annum. With the aid of irrigation the soil and climate are suitable for the profitable production of apricots, peaches, nectarines, prunes, pears, plums, certain varieties of apples, almonds, melons, cantaloupes, and citrus fruits; also wine and table grapes, raisins, sultanas, figs, olives, and most varieties of vegetables and fodder crops. Dairying and pig-raising are being conducted successfully by settlers in the areas, and stock are raised in the drier parts.

Farms varying in size from 1 acre to 250 acres are made available from time to time. The average agricultural farm is from 15 to 25 acres in extent, but to suit the requirements of dairymen and other stock farmers, blocks of larger areas have been made available. These include non-irrigable or "dry" areas, in addition to the irrigable portion. The tenure of all farms is perpetual leasehold, involving residence. The farmer may transfer his lease after five years' occupation. A specified number of acre-feet of water is allotted at a fixed charge to each holding. In 1921-22 the quantity of water distributed was 46,407 acre-feet, at an average cost of 11s. 3d. per acre-foot. An acre-foot of water means such a quantity as would cover one acre with water 12 inches deep. The average quantity of water used during 1921-22 was 1.2 acre-feet.

Subject to such conditions as to security and terms of repayment as the Commission may require, settlers may obtain an advance, or have suspended the payment of amounts owing. Such advances are limited to the total amount of funds made available by Parliament for this purpose. At 30th June, 1922, the amount of such advances outstanding was £1,151,651. The Rural Bank Commissioners also have statutory powers to make loans upon mortgage of irrigation farm leases, and to 30th June, 1922, had advanced approximately £60,000 to settlers on the Murrumbidgee Irrigation Areas. Special facilities are provided for the settlement of returned soldiers.

To 30th June, 1922, the Commission had erected 113 houses, at a total cost of £86,576, all except two being occupied by officers of the Commission, and 12 other buildings at a cost of £21,098.

Towns and villages have been established at convenient centres on the Yanco and Mirrool irrigation areas. At present the Commission performs municipal functions, but a project to establish Local Government areas in the form of shires is receiving consideration.

Abattoirs, and butter, cheese, bacon, and fruit-canning factories were established on the areas by the Commission to treat the produce of the settlers. The butter and bacon factories and the abattoirs were sold to co-operative societies on 1st July, 1921, and are now operated by the settlers. In 1921-22 the cannery made a profit of £4,069, after paying interest and depreciation.

The net loss of the Commission on its trading ventures during 1921-22 was £8,018. In addition to industrial undertakings, the Commission has undertaken to provide such municipal services as domestic water and electricity supplies, accommodation houses, and to supervise matters of health and sanitation, besides engaging in trading operations to supply settlers with live-stock, stores, and nursery stock. Co-operative enterprise, however, is receiving every encouragement, and a number of co-operative organisations have been established to handle produce and supply the settlers' requirements.

The State nurseries at Leeton and Griffith supply fruit and other trees to the settlers, and an experiment farm is maintained at Yanco under the control of the Department of Agriculture; also a viticultural nursery at Griffith (in the Mirrool irrigation area) for the propagation of vines on phylloxera-resistant stocks. An Agricultural High School has been established by the Department of Education at North Yanco on the irrigated area.

During the season 1920-21 the total area of crops irrigated was 36,311 acres, and the average amount of water used per acre 1.3 acre-feet. Details of production will be found in a statement on the next page.

#### *Hay Irrigation Area.*

The irrigation area at Hay, on the Murrumbidgee River, consists of about 4,500 acres, part of which was made available in 1893; prior to 1913 the area was controlled by a trust appointed in 1897. On 30th June, 1922, the area held and used for irrigation purposes was 1,039 acres in 109 blocks, ranging from 3 acres to 34 acres in size; generally the term of lease is thirty years, and the annual rental from 5s. to 12s. per acre. In addition, 2,698 acres of non-irrigated land had been taken up in 48 blocks, as permissive occupancies. The water-rate is fixed from time to time; during 1921-22 it was 30s. per acre per annum. The pumping machinery consists of a suction-gas plant, supplying two engines of about 55-brake horse-power each, working two centrifugal pumps, with an average combined capacity of about 4,000 gallons per minute. Dairying and pig-raising are the principal industries, the cultivation of fruit being very limited. The net loss by the State on the area in 1921-22 was £375.

#### *Curlwaa Irrigation Area.*

The Curlwaa irrigation area, situated at Wentworth, consists of 10,600 acres, made available in 1894, of which 1,813 acres are now held in irrigated holdings. On 30th June, 1922, practically the whole of this area had been taken up in areas varying from 1½ acres to 37 acres. There are a number of non-irrigated blocks containing 7,718 acres. The remainder of the area was common land, about to be subdivided. During the year 1921-22 the area under fruit was 1,000 acres, of which 750 acres were bearing. Oranges, peaches, apricots, nectarines, pears, grapes, sultanas, and currants are grown, and it has been proved that the Curlwaa soil is eminently suited to fruit culture, some of the finest oranges grown in New South Wales being the product of this locality.

The pumping plant consists of a suction-gas engine of 120 horse-power, driving an 18-inch centrifugal pump, having a maximum capacity of 8,000 gallons per minute. The main channels measure about 9 miles and 10 chains in length.

The land is leased for periods not exceeding thirty years, the annual rent at the present time varying generally from 1s. to 10s. per acre, though the rent is as much as 35s. per acre on blocks set apart in recent years. The rate for water is fixed from time to time by the Commission and is at



present 20s. per acre per annum, except in a few special cases, and there is in addition a general rate of 10s. per acre in productive bearing. Each lessee is entitled to receive a quantity of water equivalent to a depth of 30 inches per annum, limited to 4 inches in any one month. During the year 1921-22 receipts were £2,102 less than expenditure.

The rainfall in the year ended 30th June, 1922, was below the average, being 10.63 inches, and the quantity of water pumped from the Murray River was 4,366 acre-feet.

#### PROGRESS OF IRRIGATION SETTLEMENTS.

Comparative statistics of the irrigation settlements in New South Wales are shown in the following statement; the particulars for 1910-11 relate to the Hay and Cullwaa settlements only, as farming on the Murrumbidgee area was not in operation until the season 1912-13:—

Particulars.	1910-11.	1915-16.	1921-22.			
			Murrumbidgee.	Hay.	Cullwaa.	Total.
Cultivated Holdings ... .. No.	86	771	1,214	26	105	1,345
Area under—						
Crop ... .. Acres	862	22,488	33,884	225	1,372	35,481
Grain ... .. "	2	4,287	4,474	...	...	4,474
Hay and Green Food ... .. "	399	13,631	15,322	191	92	15,605
Grape Vines—						
Bearing ... .. "	186	353	1,123	2	403	1,528
Not yet Bearing ... .. "	74	486	2,981	...	217	3,193
Orchards—						
Bearing ... .. "	58	440	4,836	32	425	5,293
Not yet Bearing ... .. "	139	2,896	4,740	...	232	4,972
Live Stock—						
Horses ... .. No.	239	3,300	5,451	375	256	6,082
Cattle—						
Dairy ... .. "	484	2,461	5,223	607	...	5,830
Other ... .. "	530	1,488	8,311	702	132	9,145
Sheep ... .. "	703	32,440	12,499	488	48	13,035
Swine ... .. "	134	2,799	4,566	187	14	4,767
Production—						
Wine ... .. gal.	...	650	25,800	...	...	25,800
Sultanas ... .. cwt.	1,009	2,778	1,797	...	2,498	4,295
Raisins ... .. "		1,499	378	...	1,162	1,540
Currants ... .. "		1,848	335	...	3,456	3,791
Oranges—						
Seville ... .. bush.	273	4,988	3,091	256	...	3,347
Washington Navel ... .. "			41,652	44	21,424	63,120
Valencia ... .. "			22,468	...	3,461	25,929
All other ... .. "			3,886	38	456	4,380
Peaches—						
Early ... .. "	2,467	25,861	47,057	1,022	8,753	56,832
Canning ... .. "			168,802	5	7,502	176,309
Nectarines ... .. "			3,318	13	483	3,814
Apricots ... .. "	2,905	10,690	59,595	700	4,511	64,806
Milk ... .. gal.	171,619	504,181	1,985,067	213,407	18,994	2,217,468
Butter (on farm) ... .. lb.	5,100	12,923	46,267	2,031	1,595	49,893
Bacon and Ham (on farm) ... .. "	820	8,865	6,491	410	...	6,901

The area devoted to fruit-growing has increased considerably since 1915-16, but the orchards planted on more than half of the area have not yet reached the stage of production. Oranges, peaches, nectarines, and apricots are the principal kinds of fruit produced, but the yield is small in comparison with that which may be expected in a few years as the young trees become increasingly productive.

The following statement shows the number of fruit trees of the principal varieties, distinguishing the productive from those not yet bearing:—

Fruit trees.	1910-11.		1915-16.		1921-22.	
	Pro- ductive.	Not yet Bearing.	Pro- ductive.	Not yet Bearing.	Pro- ductive.	Not yet Bearing.
Orange—						
Seville ... ..	202	3,606	6,509	67,020	9,403	9,498
Washington Navel ...					68,961	73,010
Valencia ... ..					38,210	47,557
All other ... ..	119	136	439	9,388	7,508	5,298
Peach—						
Early ... ..	1,752	4,503	16,812	101,113	41,916	21,564
Canning ... ..					127,595	79,053
Nectarine ... ..					4,667	3,418
Apricot ... ..	2,033	2,969	5,927	42,066	59,732	44,748
Prune ... ..	...	...	...	10,290	27,488	87,461
Plum ... ..	98	282	682	5,897	10,272	6,556
Pear—						
Williams ... ..	165	1,096	2,278	14,336	16,715	8,033
Other ... ..					5,356	4,448
Apple ... ..	400	718	1,256	3,065	5,127	14,371
Fig ... ..	201	38	303	3,395	1,608	829
Almond ... ..	...	140	582	5,446	8,700	8,450

It is noteworthy that while the growing of oranges has developed rapidly the development of peach-growing, especially for canning, has been more rapid, and that apricots, prunes, pears, and apples are also receiving considerable attention.

#### IRRIGATION PROJECTS.

##### *Murray River.*

This scheme is being carried out under agreement between representatives of the Commonwealth, New South Wales, Victorian and South Australian Governments, signed on 9th September, 1914, and an amending agreement, signed on 23rd November, 1920.

The outstanding matters provided by the original and amending agreements were:—(a) Provision of water for irrigation purposes; (b) preservation of facilities for navigation; (c) allotment of equitable proportions of the available water for use by settlers in New South Wales, Victoria, and South Australia; (d) equal apportionment of the costs between the four Governments **ratifying** the agreement; (e) the appointment of a joint commission to carry the agreement into effect.

The scheme provides for the construction of (a) a dam and storage reservoir to be known as Hume Reservoir, with a capacity of one million acre-feet of water, at a cost of £1,353,000, situated on the Murray River 10 miles above the town of Albury; from this reservoir waters are to be released to supply

the needs of irrigation settlements in New South Wales and Victoria, and to provide sufficient waters for permanent navigation on the river; (b) for storage works in connection with Lake Victoria near the western boundary of New South Wales, with a capacity of 500,000 acre-feet, at a revised cost of £320,066—the waters so impounded are to be utilised for irrigation purposes in South Australia, and to maintain the flow of the river for navigation purposes; (c) thirty-five weirs and locks, at intervals along the river and its tributaries, to control the flow of the river. The total cost of all joint works agreed upon was estimated originally at approximately £4,663,000, of which rather less than one-fourth is to be contributed by the Commonwealth Government, the remainder to be paid in equal proportions by the three State Governments concerned, each of which is a constructing authority for specified portions of works.

When the scheme is carried out the river will be “canalised,” or converted into “a succession of pools,” whose levels may be regulated so that they will furnish permanent supplies for irrigation, as well as a means of navigation on the most important waterway of Australia. A minimum depth of 5 feet of water will be maintained as far as Echuca, the present head of navigation. The allotment of the available water to the respective states was approximately two-fifths of the total each to New South Wales and Victoria, and one-fifth to South Australia.

The total area of land irrigable from the River Murray and its tributaries is estimated to be approximately 1,500,000 acres, and, an investigation, is in progress to determine how the irrigable lands of New South Wales may be used most profitably.

The agreement was brought into operation on 31st January, 1917, and it was provided that the works were to be completed within twelve years of that date. Though minor operations on locks and weirs had been carried out in South Australia, construction of the main reservoir was not begun until the 28th November, 1919. It was stated in the report of the River Murray Commission (1920-21) that the work cannot be completed within the prescribed time.

Considerable progress has now been made in the work of construction, and the total expenditure by all governments in connection with the scheme during 1921-22 was £540,309; the total expenditure to 30th June, 1922, was £1,255,141, of which amounts £137,209 and £303,694 respectively were contributed by New South Wales.

To 30th June, 1922, a sum of £435,705 had been expended on the Hume Reservoir, and £158,941 on the Lake Victoria storage.

The proposed expenditure for 1922-23 was £807,000, of which £211,313 was to be contributed by New South Wales, £402,000 was to be spent on the Hume Reservoir, and £87,000 on Lake Victoria storage.

The outflow of the Murray River at Renmark is on an average 8,500,000 acre-feet per year. In 1921-22, 591,699 acre-feet of water were artificially diverted from the river in New South Wales; 807,720 in Victoria, and 66,920 in South Australia.

#### *Lachlan River.*

Investigations into the irrigation possibilities in connection with this river have been conducted for a number of years, and in 1922 a full report was prepared.

Two separate proposals were considered—the Wyangala Dam (situated 14 miles west of Cowra), to provide a storage of 273,694 acre-feet of water

at an estimated cost of £1,312,000, including resumptions, and a proposal to increase the present storage at Lake Cudgellico from 28,613 acre-feet to 46,689 acre-feet at an estimated cost of £69,000, including land resumptions. The storage at the Wyangala Dam would be equal to 35 per cent. of that of Burrinjuck.

The absence of snow in the catchment area would leave the scheme entirely dependent upon intermittent rainfall, but under the Wyangala scheme the flow of the river could be made more regular.

#### *Macquarie and Namoi Rivers.*

A suitable site for a dam on the Macquarie River has been located at Burrendong, a short distance below the junction with the Cudgegong River, and the storage possibilities are now being investigated.

Preliminary inquiries have been made with regard to the Namoi River.

#### WATERWORKS.

Provision is made by the Water Act, 1912, that all waterworks constructed by private individuals in connection with natural sources of water must be approved and licensed by the State. During the year ended 30th June, 1922, 149 applications were received for new licenses, and 143 for the renewal of existing licenses; at the date mentioned 1,573 licenses were in force for pumps, dams, and other works, small fees being charged in each case.

#### *Water Trusts and Bore Trusts.*

Part III of the Water Act, 1912, empowers the State to construct works to provide supplies of water for irrigation, stock, or domestic purposes, and for drainage. The capital cost of such works are repaid by beneficiaries, with interest in instalments spread over a period of years. The works are administered by trustees appointed from among the beneficiaries under the Act, except in the case of trusts in the Western Division, when the Western Land Board is appointed as trustee.

For the supply of water under these conditions works have been carried out by the State, and local trusts have been constituted in connection with (a) seventy-eight artesian wells; (b) nine schemes for the improvement of natural off-takes of effluent channels, for the purpose of diverting supplies from the main rivers; (c) in three instances for the construction of weirs across stream channels; and (d) two pumping schemes—one from a natural watercourse, and one from a well. Three of the fourteen schemes under headings (b), (c), and (d) have not been commenced. The cost of the remaining eleven was £30,191. Three additional schemes have been proposed.

The area included within these trusts amounts to 7,637,967 acres.

In addition, there are twenty-seven national works for the control of river flow under control of the Commission.

#### *Artesian Bores.*

That portion of the great Australian artesian basin which extends into New South Wales covers approximately 70,000 square miles, and is situated in the north-western portion of the State.

The first artesian bore was sunk in 1879 on the Kallara pastoral holding, between Bourke and Wilcannia, and the first Government bore was completed in 1884 at Goonery on the Bourke-Wanaaring road.

The following statement shows the extent of the work which has been successfully effected by the Government, and by private owners, up to the 30th June, 1922 :—

Bores.	Flowing.	Pumping.	Total.	Total Depth.
				feet.
For Public Watering-places, Artesian Wells, etc.	125	36	161	332,858
For Country Towns Water Supply ... ..	3	1	4	6,533
For Improvement Leases ... ..	34	3	37	58,412
Total, Government Bores ..	162	40	202	397,803
Private Bores... ..	223	82	305	447,849

The average depth of Government bores is 1,969 feet, and of private bores 1,468 feet, and they range from 89 to 4,338 feet.

The deepest wells in New South Wales are in the county of Stapylton, one at Boronga having a depth of 4,338 feet and an outflow at present of 908,090 gallons; another at Dolgelly has a depth of 4,086 feet, and a discharge of 534,406 gallons per day. The largest outflow at the present time is at the Wirrah bore, in the county of Benarba, which yields 1,062,123 gallons a day, and has a depth of 3,578 feet.

Of the 555 bores which have been sunk, 385 are flowing, and give an aggregate discharge of 84,589,733 gallons per day; 122 bores give a pumping supply, the balance of 48 being failures. The total depth bored is 906,594 feet.

The flow from 79 bores is utilised for supplying water for stock on holdings served in connection with bore-water trusts or artesian districts under the Water Act of 1912. The total flow from these bores amounts to 34,712,398 gallons per day, watering an area of 4,556,024 acres by means of 2,820 miles of distributing channels. The average rating by the bore trusts to repay the capital cost, with 4 per cent. interest, in twenty-eight years, is 1-5d. per acre, including the cost of maintenance and administration.

In the majority of cases the remaining bores are used by pastoralists for stock-watering purposes only, but in a few instances the supply is utilised in connection with country towns.

The watering of the north-western country by means of bore-water has largely increased the carrying capacity of the land; but, what is perhaps of greater importance, it has made practicable some pastoral settlement on small holdings in country previously utilised almost entirely by companies holding extensive areas.

It has been determined that the multiplicity of bores is the chief factor governing the annual decrease in bore-flows, also that the limitation of the discharge of water from a bore will prolong its existence as an efficient flow; action has been taken, therefore, to prevent any waste by the control of the bore-flow, and by its adjustment to actual needs. It is anticipated that this action will materially reduce the rate of decrease in the future.

#### *Private Artesian Bores.*

Much has been done in the way of artesian boring by private enterprise. So far as can be ascertained, 329 private bores have been undertaken in

New South Wales, of which 24 were failures. The yield of the flowing bores is estimated at 38 million gallons per day. No data are available regarding the pumping bores.

#### *Shallow Boring.*

Arrangements were made by the Government in 1912 to assist settlers by sinking shallow bores, and the scheme, which was described fully in the 1916 issue of this Year Book, has met with considerable success. Operations were commenced with one plant only, but the number has been increased gradually and 28 are now at work. During the year 1921-22, no less than 330 new applications were received for use of the plant of the Commission, and 223 bores were completed during the year.

Up to the 30th June, 1922, 950 bores had been undertaken, but 175 proved failures, the total cost being £187,365. The total depth bored was 271,386 feet, the greatest depth of any bore being 1,000 feet. During the year £55,975 was expended on shallow boring operations, and £25,941 was repaid by settlers to the Government.

In addition to the work conducted under the shallow boring regulations, 22 bores have been sunk in the Pilliga Scrub and on Crown lands for the Lands Department and Forestry Commission. The fact that 52 of the bores put down in the Pilliga Scrub are giving a flowing supply is of special interest, as it indicates the possibility of tapping a small and hitherto unknown artesian basin.

#### *Growth of Artesian Boring.*

The rapid development which has occurred in utilising the underground water resources of the State in the past ten years is evident from the fact that the number of successful bores of all kinds increased from 458 in 1911 to 1,282 in 1922.

## SOCIAL CONDITION.

THE social condition of the people of New South Wales, judged from the standpoint of health and living conditions, compares favourably with that of any other part of the world. The climate is salubrious with abundant sunshine; the supply of food is sufficient for the whole community; wages, hours of labour, and other industrial conditions are regulated with the object of preserving the health of the workers and of enabling even the lowest paid employee to maintain a family according to a fairly comfortable standard of living; and special provision is made to safeguard the welfare of juveniles and of women in industrial occupations.

The system of Government is based on a broad franchise which embraces every adult citizen; the legal system is based on principles which give equal status to all citizens; the land laws are designed to promote a healthy growth of rural settlement, and the tariff laws aim at the extension of local industries without any encroachment upon existing standards of industrial employment; the railways, being owned by the State, are used to develop national resources, and the burden of taxation is rendered proportionate to the means of the individual taxpayer, *e.g.*, by the graduated taxation of incomes. Legal restrictions have been placed upon gambling and upon the manufacture and sale of intoxicating liquors and deleterious drugs in order to minimise the social evils attendant upon poverty and drunkenness. Primary education is free and illiteracy is unusual.

The mildness of the climate enables the people to engage in outdoor recreation at all times of the year and facilitates measures for the prevention of sickness and the encouragement of hygienic conditions of life which find their reflex in low death rates, in the decreasing incidence of preventable diseases, and in the absence of endemic diseases which are a constant menace to health in other countries. For persons who need special treatment, on account of sickness, etc., hospitals and other institutions have been established, and pensions are paid to the aged and infirm.

### PUBLIC HEALTH SERVICES.

The principal State services in relation to public health in New South Wales are organised as the Department of Public Health under the control of a Minister of the Crown. The department includes two branches, one directed by the Board of Health and the other by the Director-General of Public Health; their functions, though distinct, are closely co-ordinated as they are served by the same staff, and the Director-General, who is a permanent salaried officer of the Government, is *ex officio* President of the Board of Health. The Board consists of not less than seven and not more than ten members, including four legally qualified medical practitioners, all being nominated by the Government; it is the executive and administrative authority in connection with the health laws; it acts in an advisory capacity towards the Minister for Public Health and the Government, and exercises general supervision in regard to public health matters. The Department of Public Health controls the State institutions for the treatment of the sick and the infirm, and it contains a microbiological laboratory, which is engaged in important investigations.

Other Government Departments supervise measures in connection with child welfare, assistance to public hospitals, and charitable relief; while a special department has been organised for the care of State children.

The executive personnel of the Department of Public Health includes medical officers and sanitary inspectors. The former are permanent salaried officers, appointed by the Government, who devote the whole of their time to matters relating to public health in groups of populous districts. It was intended that all the more densely-populated districts should be placed under the supervision of medical officers, but up to the present they have been appointed in three areas only, viz., the Metropolitan district; the Hunter River district, which includes Newcastle; and the Broken Hill district. Outside these areas expert advice may be obtained from medical officers attached to the central staff of the Public Health Department, who visit localities when required. In every town a local medical practitioner is appointed as a Government medical officer for the purpose of attending to Government medical work, *e.g.*, inquests, sickness in gaols, &c.; they have no regular duties nor special legal powers, and are paid in fees for services rendered.

The most important legislative enactments relating to public health are the Public Health Act dealing with public health and sanitation, and Acts relating to dairies supervision, noxious trades, diseased animals and meat, and pure food; also provisions of the Local Government Act which specify the powers and duties of the municipal and shire councils for ensuring the health of the incorporated areas. By the provisions of various Acts the authorities are empowered to take steps to prevent the spread of infectious diseases, to regulate the erection of dwellings, and to order the demolition or improvement of insanitary buildings, to prohibit the manufacture or distribution of unwholesome or adulterated foods and drugs (with special powers in relation to milk and meat), to regulate the conduct of noxious trades, to deal with nuisances, &c. Control of sanitation by means of by-laws and regulations is the method adopted generally, as being readily adaptable to the varying conditions of a widely-scattered community.

Executive duties in relation to public health devolve primarily upon the local authorities, who carry out the functions under supervision of the Board of Health as the central controlling authority. Within municipalities the duties are undertaken by the local councils, and outside municipal areas they are performed either by the shire councils or by persons or bodies specially appointed for the purpose.

In addition to the organisation under the control of the State Government there is a Federal Department of Public Health, which discharges important functions in regard to quarantine, research relating to causes of diseases and of deaths, and to methods of prevention and cure, industrial hygiene, &c.

#### *Government Expenditure on Charitable Relief.*

The expenditure by the State on hospitals and charitable relief in 1921-22 amounted to £2,011,478.

The following statement shows the growth of expenditure in the five years ended 30th June, 1922 :—

Payments from—	1918.	1919.	1920.	1921.	1922.
	£	£	£	£	£
Consolidated Revenue ...	983,453	1,283,114	1,726,475	1,803,287	1,905,903
Public Works Account ...	49,683	77,132	103,768	117,185	105,575
Total ...	£ 1,033,166	1,360,246	1,830,243	1,920,472	2,011,478



The expenditure from Consolidated Revenue on hospitals and charities includes the cost of maintenance of the State institutions, also subsidies granted to other institutions.

The expenditure on hospitals and charities during the years ended June, 1919 and 1920, was greatly augmented by reason of expenses in connection with an epidemic of influenza in 1919; large sums were expended in providing treatment for persons affected with the disease and in compensating for the temporary closure of schools and businesses.

Adding to the expenditure from Consolidated Revenue, as stated above, the subvention paid by the State Government to friendly societies, and the old-age, and invalidity pensions and the maternity allowances provided by the Commonwealth Government, the expenditure from public revenue on eleemosynary objects in New South Wales in 1921-22 amounted to £4,268,841 or £2 0s. 1d. per head. A classification of the items of expenditure during the last two years is shown below in comparison with the expenditure ten years earlier. Expenditure in connection with the medical inspection of school children is not included, nor costs of administration, except in regard to the State Children Relief Department, the mental hospitals, and the protection of aborigines.

Head of Expenditure.	1911-12.	1920-21.	1921-22.
	£	£	£
General Hospitals and Charitable Institutions	130,368	402,243	443,470
Mental Hospitals ... ..	212,616	564,388	537,096
Children's Relief ... ..	106,557	372,103	472,268
Government Asylums for the Infirm ...	87,708	171,602	164,848
Destitute and Deserted, Sick and other ...	32,281	227,132	222,002
Aborigines' Protection ... ..	16,475	22,485	22,506
Charitable Societies ... ..	4,624	5,652	6,628
Subvention to Friendly Societies ... ..	11,000	29,594	56,796
Expenses of Influenza Epidemic ... ..	...	20,773	4,120
Miscellaneous ... ..	2,401	16,909	32,965
<b>State ... ..</b>	<b>604,030</b>	<b>1,832,881</b>	<b>1,962,699</b>
Old-age and Invalidity Pensions ... ..	821,993	1,951,744	2,029,077
Maternity Allowances ... ..	...	278,200	277,065
<b>Commonwealth ... ..</b>	<b>821,993</b>	<b>2,229,944</b>	<b>2,306,142</b>
<b>Total ... ..</b>	<b>£ 1,426,023</b>	<b>4,062,825</b>	<b>4,268,841</b>
<b>Per head of Population—</b>	<b>£ s. d.</b>	<b>£ s. d.</b>	<b>£ s. d.</b>
State ... ..	0 7 1	0 17 6	0 18 5
Commonwealth ... ..	0 9 5	1 1 4	1 1 8
<b>Total ... ..</b>	<b>£ 0 16 6</b>	<b>1 18 10</b>	<b>2 0 1</b>

The expenditure in 1921-22 was approximately three times the amount spent in 1911-12; the cost to the State per head of population increased from 7s. 1d. to 18s. 5d.

#### *The Treatment of Sickness.*

Institutions for the treatment of sickness and disease have been established in various localities throughout the State. In addition to private hospitals which are owned entirely by private persons and conducted as business enterprises, public hospitals are maintained by the State, or by the people resident in the districts in which the hospitals are located, with the assistance

of subsidy from the public funds; or by charitable organisations; there are also special hospitals, State and private, for the treatment of mental and nervous ailments, and a State lazaret for the segregation of patients afflicted with leprosy.

The State exercises a measure of supervision over the practice of professional persons engaged in the treatment of sickness and disease; medical practitioners, dentists, and pharmacists are required to register with a board established for each profession under statutory authority. At the end of the year 1922 there were on the registers 2,457 medical practitioners, 1,761 dentists, 1,239 pharmacists, and 388 other persons licensed to sell poisons. Members of the nursing profession are certificated by the Australasian Trained Nurses' Association, though the organisation has no legal status as to supervision. The number of certificated nurses at the end of 1922 was 4,067, viz., 2,567 general nurses, 1,462 obstetric, and 38 mental.

Special efforts are made to provide for the treatment of sickness and accident in sparsely populated districts. The Government subsidises medical practitioners with a view to encouraging them to practise in outlying bush settlements; usually the subsidy is the amount necessary to bring their earnings to a certain sum. The Bush Nursing Association appoints nurses in country localities; the nurse in each district works under the supervision of a local committee, who pay expenses and fix charges for her services, etc., persons in necessitous circumstances being exempt from the payment of fees.

#### *Private Hospitals.*

A private hospital may not be conducted except under license in accordance with the Private Hospitals Act of 1908, which applies to all establishments in which a charge is made for treatment, except those maintained or subsidised by the State or licensed under the Lunacy Act or the Inebriates Act. The licenses are issued annually by the Minister for Public Health on the recommendation of the Board of Health, and it is prescribed that every private hospital must be under the direct control of a person approved by the Board. Licensees are required to comply with regulations as to structure, management, and inspection.

In 1922 the private hospitals numbered 558, viz., 212 in the metropolitan district and 346 in the country. The classification of the hospitals, according to the nature of the cases received and to the number of beds available, are shown in the following statement :—

District.	Classification.				Accommodation.			
	Medical, Surgical, and Lying-in.	Medical and Surgical.	Lying-in.	Total.	1 to 3 Beds.	4 to 10 Beds.	11 to 20 Beds.	Over 20 Beds.
Sydney ... ..	No. 60	No. 18	No. 134	No. 212	No. 69	No. 81	No. 34	No. 28
Country ... ..	129	14	203	346	134	172	34	6
Total ... ..	189	32	337	558	203	253	68	34

There has been an increase of 115 in the number of private hospitals since 1911, when there were 114 in Sydney and 329 in the country.

*Public Hospitals.*

Public hospitals embrace all institutions for the care of the sick, except those owned and maintained entirely by private persons. Some are maintained wholly by the State, those in the metropolitan district being the Coast Hospital for medical and surgical cases, including cases of infectious diseases; the Lady Edeline Hospital for babies, two convalescent hospitals, and a number of institutions for maternity cases; and there are two State institutions in the country, viz., the Waterfall Hospital for Consumptives and the David Berry Hospital at Berry for general treatment.

The Public Hospitals Act of 1898 and an amending Act passed in 1900 may be applied by proclamation to any hospital maintained partly by private contributions and partly by grants from the public funds; the Acts define the procedure for the election of officers for the management of the institution, and prescribe that a committee of management, trustees, auditors and other officers for each hospital must be elected annually by the contributors who have paid at least 10s. to the hospital during the preceding twelve months, or who have contributed £10 in one sum. The committee appoints the treasurer, secretary, medical officers and staff, and makes rules for the management and control of the hospital. Some of the public hospitals are under the ægis of religious denominations, and are conducted by committees nominated by subscribers or by religious communities who own the establishments; they are open to persons of all creeds, and are usually subsidised by the State.

The figures shown in the following tables relating to public hospitals do not include particulars relating to institutions used exclusively for soldiers and sailors and of the following State institutions, viz., the convalescent hospitals (two in number), the maternity hospitals and rest homes, and the five asylum hospitals. Excluding those institutions, there were 154 public hospitals in New South Wales at the end of 1921, viz., 26 in the metropolitan district, with 3,841 beds, and 128 in the country, with 4,234 beds. The hospitals in the metropolitan district included 14 general hospitals, with 2,787 beds; 3 hospitals for children, 338 beds; 4 for women, 495 beds; 3 for incurable cases, 145 beds; one institution for convalescents, 76 beds, and a dental hospital. All the hospitals in the country provided general treatment, except four for consumptives, 536 beds, and one for convalescents, 110 beds.

The extent to which the hospital services have increased since 1901 is shown below :—

Year.	Hospitals.			Beds.		
	Metro- politan.	Country.	Total.	Metro- politan.	Country.	Total.
1901	15	103	118	1,453	1,938	3,391
1906	20	114	134	1,833	2,419	4,252
1911	21	120	141	2,113	2,976	5,089
1916	26	125	151	2,596	3,469	6,065
1921	26	128	154	3,841	4,234	8,075

The figures show a remarkable expansion in regard to hospital accommodation, the tendency being to enlarge existing institutions rather than to establish new hospitals; the average number of beds per hospital in 1921 was 52, as compared with 28 in 1901. The accommodation as stated includes beds in the open air, which numbered 903 in 1921.

The medical staffs of the public hospitals consist for the most part of practitioners who give their service free of charge, the proportion of honorary medical officers being greater in the metropolitan district than in the country. Of the nursing staffs the majority, about 55 per cent., are qualified nurses, and 38 per cent. are being trained. The following statement shows particulars of the medical and nursing staffs attached to the public hospitals during 1921 :—

Hospitals.	Medical Staff.		Nursing Staff.			Total.
	Honorary.	Salaried.	Qualified Nurses.	Nurses Training.	Wardsmen & Wardmaids.	
Metropolitan ...	433	111	771	588	92	1,451
Country ...	263	142	628	383	84	1,095
Total ...	696	253	1,399	971	176	2,546

The number of indoor patients treated, as shown below, represents the aggregate of the number of cases treated at each hospital, those admitted more than once during a year being counted each time admitted; the figures include transfers, of which particulars are not available, but the patients treated in the convalescent hospitals are excluded, as the majority of such cases are known to have been transferred from other hospitals. The figures relating to outdoor patients are exclusive of those treated at the dental hospital, which numbered 7,072 in 1921.

Year.	Indoor Patients.					Outdoor Patients treated during the Year.
	Treated during the Year.	Died.	Remain- ing at end of Year.	Average per day.		
				Number.	Per 1,000 of mean population.	
1901	32,012	2,477	2,247	2,045	1.64	80,259
1906	41,552	2,576	2,574	2,636	1.73	83,390
1911	56,564	3,550	3,409	3,302	2.05	116,346
1916	75,856	5,027	4,187	4,729	2.21	178,439
1917	76,660	4,627	4,143	4,655	2.17	166,994
1918	77,253	4,818	4,220	4,784	2.17	244,606
1919	86,884	6,624	4,657	4,959	2.33	195,289
1920	91,763	5,710	4,987	5,466	2.41	238,332
1921	97,034	5,493	4,859	5,763	2.30	250,035

There has been a rapid increase in the number of cases treated in the public hospitals, and the average daily number of patients per 1,000 of the population has risen by 40 per cent. since 1901.

The increase does not indicate a larger degree of sickness in the community, but is due principally to a wider knowledge concerning the benefits to be derived from expert treatment which is provided in the hospitals and to the largely increased hospital accommodation; also the increased cost of home-nursing and the scarcity of domestic labour probably cause more patients to go to hospitals for treatment.

Of the indoor patients in 1921, the metropolitan hospitals provided treatment for 50,808, and 46,226 were accommodated in the country institutions, the corresponding figures in 1911 being 29,610 and 26,954.

The number of outdoor patients, as stated, represents the aggregate of the numbers of distinct persons who received outdoor relief at each hospital, and the number has increased more than threefold during the period under review. The bulk of the cases in 1921 were treated at five metropolitan hospitals in or close to the city, viz., Sydney Hospital, 46,140, Royal Prince Alfred, 35,556, Royal Alexandra for Children, 31,927, Lewisham, 30,625, and St. Vincent's, 28,090; the total in the metropolitan district was 227,103, and in the country 30,004.

The following statement shows the revenue and expenditure of the public hospitals during the year 1921—the figures include particulars of the State hospitals, except those connected with the asylums for the infirm, which were excluded because it is not practicable to separate the expenditure incurred in the treatment of sickness from the expenses in respect of the ordinary functions of the asylums.

The revenue and expenditure of the Thomas Walker Convalescent Hospital which is privately endowed, is excluded also.

Items.	Amount.			Per cent. of Total.		
	Metro- politan.	Country.	Total.	Metro- politan.	Country.	Total.
Receipts—						
State Aid ... ..	277,678	229,590	507,268	49·8	45·4	47·7
Subscriptions, Donations, and Entertainments ...	158,560	185,693	344,253	28·5	36·7	32·4
Contributions by Patients	73,597	75,159	148,756	13·2	14·9	14·0
Miscellaneous ... ..	47,147	15,221	62,368	8·5	3·0	5·9
Total Receipts £	556,982	505,663	1,062,645	100·	100·	100·
Expenditure—						
Buildings and Repairs ...	80,604	79,895	160,499	14·0	16·4	15·1
Salaries and Wages ...	226,602	171,071	397,673	39·5	35·2	37·5
Provisions, Stores, and Out- patients ... ..	217,247	203,795	421,042	37·9	42·0	39·8
Miscellaneous ... ..	49,171	30,896	80,067	8·6	6·4	7·6
Total Expenditure £	573,624	485,657	1,059,281	100·	100·	100·

According to the hospital accounts the State-aid received by the metropolitan institutions in 1921 amounted to £277,678, or 49·8 per cent. of the total receipts. Of this sum £79,597 represented the expenditure in connection with the Coast Hospital and the Lady Edeline Hospital; the Sydney Hospital received £60,823, and the Royal Prince Alfred £52,200; the balance, £85,068 was distributed amongst 19 institutions, and 2 hospitals were unsubsidised. In the country districts State-aid represented 45·4 of the receipts; the amount included £94,466 for the upkeep of the Waterfall Hospital for Consumptives and the David Berry Hospital; the Newcastle and Broken Hill Hospitals received £34,304 and £25,001 respectively, and £135,124 was granted to the other institutions, only one being unsubsidised.

Subscriptions, donations, bequests, and the proceeds of benefit entertainments, etc., yielded nearly one-third of the hospital revenue, the proportion being higher in the country than in the metropolitan district; and contributions by patients represented 14 per cent.

The growth of hospital revenue and expenditure since 1901 is illustrated in the following statement:—

Year.	Revenue.					Expenditure.				
	State aid.	Subscriptions and Donations.	Contributions by Patients.	Other.	Total.	Buildings and Repairs.	Salaries and Wages, Provisions, Stores, etc.	Other.	Total.	
	£	£	£	£	£	£	£	£	£	
1901	91,363	50,939	23,698	16,727	182,727	17,354	141,399	17,365	176,118	
1906	109,296	85,421	31,525	16,617	242,859	26,815	179,431	18,666	224,912	
1911	159,147	131,244	50,099	22,867	363,357	50,902	263,037	34,877	348,816	
1916	285,385	163,018	85,551	24,981	558,935	80,182	433,339	37,546	551,067	
1917	296,561	174,805	91,336	27,933	590,635	85,997	473,148	43,496	602,641	
1918	318,291	243,892	97,481	52,528	712,192	97,930	534,407	54,324	686,661	
1919	386,316	243,234	95,681	50,874	776,105	132,589	619,536	65,470	817,595	
1920	458,818	355,870	132,230	62,054	1,008,972	159,230	765,805	68,565	993,600	
1921	507,268	344,253	148,753	62,368	1,062,645	160,499	818,715	80,067	1,059,281	

## PER HEAD OF POPULATION.

	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1901	1 4	0 9	0 4	0 3	2 8	0 3	2 1	0 3	2 7
1906	1 6	1 1	0 5	0 3	3 3	0 4	2 5	0 3	3 0
1911	1 11	1 7	0 7	0 3	4 4	0 7	3 2	0 5	4 2
1916	3 0	1 9	0 11	0 3	5 11	0 10	4 7	0 5	5 10
1917	3 1	1 10	0 11	0 4	6 2	0 11	5 0	0 5	6 4
1918	3 3	2 6	1 0	0 7	7 4	1 0	5 6	0 7	7 1
1919	3 10	2 5	1 0	0 6	7 9	1 4	6 2	0 8	8 2
1920	4 5	3 5	1 4	0 7	9 9	1 6	7 5	0 8	9 7
1921	4 10	3 3	1 5	0 7	10 1	1 7	7 9	0 9	10 1

The average amount of hospital revenue per head of population has risen by two and a third times during the last ten years, the amount in 1921 being 10s. 1d. per head, of which State-aid represented 4s. 10d. Contributions by patients showed an average of 1s. 5d. per head of population, but fees paid while in hospital do not constitute the total amount of their payments, as many of them contribute at other times in the form of subscriptions, donations, etc. It is noticeable that the amount of voluntary subscriptions, etc., per head of population was somewhat lower in 1921 than in the preceding year.

Under the existing method of financing hospitals by unorganised charity and supplementary grants from the public revenue many hospitals have increasing difficulty in meeting obligations and in providing accommodation for all persons seeking admission.

During the year 1921 the debit balance of the current accounts of the metropolitan hospitals increased from £173,428 to £215,161, or by £41,733, and the invested funds increased from £187,510 to £212,601, or by £25,091. In regard to the country hospitals, however, the current accounts showed a

credit balance of £21,266 at the beginning, and of £22,637, at the end of the year, and the invested funds grew from £111,160 to £129,795.

Hospitals.	Current Account.		Invested Funds.	
	At 1st Jan., 1920.	At 31st Dec., 1921.	At 1st Jan., 1920.	At 31st Dec., 1921.
	£	£	£	£
Metropolis ...	(-) 173,423	(-) 215,161	187,510	212,601
Country ...	21,266	22,637	111,160	129,795
Total ...	(-) 152,162	(-) 192,524	298,670	342,396

(-) Indicates debit balance.

In May, 1923, the Government convened a conference of persons experienced in the management of hospitals to consider the question of amending the law relating to public hospitals. The conference favoured a systematic distribution of the hospitals, in order to prevent overlapping and wasteful expenditure, by subdividing the State into hospital districts, by providing base hospitals, where necessary, to relieve the large metropolitan hospitals, and by eliminating superfluous hospitals.

In regard to finance the conference expressed its opinion that there was no need for a radical change in the present system of voluntary contributions and State subsidies, and, assuming that the necessary funds will be provided for subsidies and that the committees of management will include representatives of the State, the local governing bodies, and the industrial organisations contributing to local hospital funds, it recommended an alteration in the basis of paying subsidies. Under existing arrangements the Government pays subsidies at the rate of £1 for £1 on moneys raised by voluntary contributions; the conference suggested that a system be adopted whereby the grants would be based upon (1) the amount of work done, (2) sums raised by subscriptions, donations, bequests, and the proceeds of entertainments; (3) amounts contributed by employers and employees on the basis of weekly payments; (4) contributions by patients; and (5) contributions by local bodies as grants or as payment for the treatment of patients residing in their localities. It was recommended also that the Board of Health be empowered to administer the Government grant, to regulate the establishment of hospitals, to supervise the keeping of accounts, and to foster economy in administration; that an efficient ambulance transport service be established; and that the scheme of bush nursing be extended.

#### TREATMENT OF COMMUNICABLE DISEASES.

Within the State, the Board of Health is vested with authority to make provision for the treatment and prevention of infectious diseases; and the Federal Government is responsible for the administration of the quarantine laws in respect of vessels, persons, and goods arriving from oversea ports.

Cases of such diseases as leprosy, bubonic plague, smallpox, scarlet fever, typhoid fever, diphtheria, infantile paralysis, cerebro-spinal meningitis, must be notified to the Board of Health: no case of typhus, yellow fever, or cholera has occurred in New South Wales, and cases of bubonic plague are rare. Cases of pulmonary tuberculosis must be notified in certain areas as proclaimed.

Where necessary, provision is made for the isolation of infectious cases. In the Metropolis the majority are treated at the Quarantine Station, or

at the Coast Hospital; country cases are accommodated in special wards of the local hospitals.

The following table shows the notifications of the various diseases for five years, 1917-1921; particulars relating to the deaths and death-rates are shown in the chapter relating to Vital Statistics.

Disease.	1917.	1918.	1919.	1920.	1921.			Total.
					Metro- politan. District.	Hunter River District	Other Districts	
Smallpox ...	119	...	...	...	...	...	...	...
Typhoid Fever ...	1,091	810	857	1,015	346	133	470	949
Scarlet Fever ...	2,255	1,308	959	936	508	52	500	1,060
Diphtheria ...	5,805	5,151	2,826	5,043	2,853	514	3,487	6,854
Infantile Paralysis ...	16	50	8	45	120	8	56	184
Acute Malarial Fever	17	11	35	...	...	...	...	...
Cerebro-Spinal Meningitis ...	197	120	28	34	10	4	16	30
Tuberculosis ...	1,319	1,308	1,102	1,509	1,091	50	99	1,240
Leprosy ...	3	1	4	4	1	1	...	2
Bubonic Plague ...	...	...	...	...	2	...	...	2

Acute malarial fever was notifiable between March, 1915, and November, 1919, when the proclamation was revoked.

#### *Leprosy.*

Persons suffering from leprosy are segregated in the Leper Lazaret, which was opened for the admission of patients in 1883, though statutory provision for the compulsory notification of the disease and detention of lepers was not made until 1890. During 1921 three persons were admitted, two died, one was discharged as cured, and two were repatriated, leaving 22—17 males and 5 females—in the lazaret on 31st December, 1921. The birthplaces of the inmates of European descent were New South Wales, 7; Victoria, 1; England, 3; Sweden, 1; Greece, 1. There were 9 coloured inmates—3 were born in China, 4 in the Pacific Islands, 1 in Java, and 1 is an Australian aboriginal. The cost of management was £3,939, or an average of £172 1s. per inmate.

#### *Tuberculosis.*

A remarkable reduction in the mortality from tuberculosis from 15 to 6 per 10,000 of population has been effected since the enactment of the Dairies Supervision Act of 1886, the Pure Food Act of 1908, and other legislation for the protection of the food supply from insanitary conditions, but the fact, as shown in the chapter Vital Statistics, that tuberculosis causes 6.4 per cent. of the deaths in New South Wales demonstrates the necessity for further drastic measures to prevent the spread of the disease.

Pulmonary tuberculosis was proclaimed as notifiable in the Metropolitan and Newcastle districts in 1915, and in the Blue Mountains tourist district in 1916. The Board of Health may prohibit affected persons from working in connection with preparation or packing of food.

For the treatment of cases of tuberculosis there are four special institutions which are classified as public hospitals, viz., the State Hospital at Waterfall, the Queen Victoria Homes for Consumptives at Wentworth Falls and Thirlmere, and the R. T. Hall Sanatorium at Hazelbrook; tuberculous cases are received also at the Sacred Heart Hospice for the Dying, Sydney; and at



private hospitals. At the hospitals attached to the State asylums at Rookwood and Newington, accommodation is reserved for a limited number of tuberculous patients, and arrangements have been made with the Government of South Australia to provide sanatorium treatment in that State for patients from Broken Hill.

The Waterfall Hospital is the largest institution for the treatment of persons suffering from pulmonary tuberculosis; it contains 408 beds, and 660 males and 272 females were treated during 1921. The expenditure was £31,698; the average cost of treatment, excluding buildings, repairs, etc., was £86 2s. 8d. per occupied bed.

The dispensary system for the treatment of tuberculosis was inaugurated in Sydney in 1912 by the National Association for the Prevention and Cure of Consumption, and it is being extended with the co-operation and financial assistance of the Government; throat and chest dispensaries have been established in connection with three Metropolitan hospitals, and at Newcastle. Medical advice is given to patients, and nurses are employed to visit their homes and instruct the inmates in precautionary measures to prevent the spread of the disease.

#### *Venereal Diseases.*

The treatment of venereal diseases is regulated under the Venereal Diseases Act, 1918, which came into operation on 1st December, 1920; it prescribes that all persons suffering from such diseases must place themselves under treatment by a qualified medical practitioner, and must remain under treatment until cured. Medical practitioners are required to notify all cases to the commissioner appointed under the Act; treatment by unqualified persons is prohibited, also the sale of certain drugs used in connection with these diseases, except when prescribed by a qualified medical practitioner.

Clinics have been established at several of the metropolitan public hospitals, and free treatment is provided at all subsidised hospitals, drugs and instruments being supplied by the Government. Special wards for these cases have been opened at the Newington and Liverpool State Hospitals. The notifications during the year 1921 numbered 9,405, of which 4,477 cases were notified by metropolitan hospitals. Prisoners suffering from venereal diseases are detained for treatment in lock hospitals under the Prisoners' Detention Act; particulars are given in the chapter relating to Prison Services.

#### TREATMENT OF MENTAL DISEASES.

The law relating to persons suffering from mental diseases is contained in the Lunacy Act of 1898; its provisions apply mainly to those who may be certified as insane and incapable of managing their affairs. Such persons may be admitted to an institution, if certified by two qualified medical practitioners, either at the request of relatives or friends, or upon the order of two Justices of the Peace; but relatives have the right of custody of insane persons brought before the Justices if they can give a satisfactory assurance that proper care will be taken of them. Persons found to be insane by proceedings before the Supreme Court in its lunacy jurisdiction may be admitted to mental hospitals upon the order to the Judge. The influx of insane persons to New South Wales is restricted under the Lunacy Act, which renders the owner, charterer, agent, or master of a vessel liable for the maintenance of any such person landed in the State.

The estates of persons proved to be incapable, through mental infirmity, of managing their affairs, are placed under the management and care of the Master in Lunacy.

*Mental Hospitals.*

The Government has set apart a number of institutions for the reception and treatment of insane persons, and private institutions may be licensed for the purpose; licenses may be granted also for the reception of a single patient, but unauthorised persons are not permitted to take charge for profit of a person of unsound mind. All institutions for mental cases, including reception houses, etc., for their temporary accommodation, are subject to inspection by the Inspector-General of Mental Hospitals, and, with his consent, harmless patients may be boarded out or released on leave, or they may be discharged to relatives or friends who undertake to care for them.

There are nine Government mental hospitals, in addition to a hospital for criminal insane, and three private institutions licensed to receive mental patients; and under an arrangement with the Government of South Australia, patients from Broken Hill are accommodated in a hospital in that State, the cost of their maintenance being paid by the Government of New South Wales.

At 30th June, 1922, there were in the mental hospitals and licensed houses in New South Wales 7,497 patients—4,302 males and 3,195 females; in the South Australian hospitals there were 12 men and 15 women from this State; 183 men and 290 women were on leave from the institutions, so that the total number of persons under cognizance as being of unsound mind was 7,997, consisting of 4,497 males and 3,500 females. The number at intervals since 1901 is shown below :—

At end of Year.	Number of Mental Patients.			Proportion per 1,000 of Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
1901	2,684	1,804	4,488	3.72	2.75	3.26
1911	3,810	2,573	6,383	4.30	3.19	3.77
1916	4,264	3,020	7,284	4.43	3.18	3.85
1917	4,339	3,048	7,387	4.55	3.20	3.88
1918	4,416	3,212	7,628	4.53	3.31	3.92
1919	4,359	3,236	7,595	4.29	3.28	3.38
1921*	4,510	3,432	7,942	4.23	3.35	3.80
1922*	4,497	3,500	7,997	4.15	3.35	3.76

\*At 30th June.

The proportion of the population who were under official cognizance as mental patients increased slowly until 1918; in the following year 180 patients died during an epidemic of influenza, and the proportion declined, but it has since risen again. In order to ascertain the general rate of insanity amongst the population, it would be necessary to take into consideration the patients treated in their homes and those suffering from mental disorders but not in a form which warrants certification as insane nor compulsory detention in a mental hospital. It is considered a grave defect in the law that it does not make provision for the treatment of persons in the early stages of mental derangement, when specialised care is most likely to be beneficial. Steps towards meeting the needs of such persons were initiated recently by the establishment of a psychiatric clinic, where voluntary patients suffering from the milder forms of mental and nervous disorders are received upon their own request. During the year 1921-22

the number of resident patients under treatment was 133, and there were 61 in the institution at 30th June, 1922; outdoor treatment is provided also.

Reception houses have been established in Sydney, Newcastle, and Kenmore (Goulburn), where persons showing symptoms of mental diseases are placed under observation and cases of short duration are treated; the number under observation and care during 1921-22 was 1,700, and 1,075 were transferred to mental hospitals.

The number of admissions and re-admissions to mental hospitals during the last five years are shown below :—

Year.	Admissions.			Re-admissions.		
	Males.	Females.	Total.	Males.	Females.	Total.
1917	710	393	1,103	109	98	207
1918	670	493	1,163	150	145	295
1919	726	560	1,286	104	94	198
1921*	711	622	1,333	115	106	221
1922*	684	552	1,236	135	103	241

\* Year ended 30th June.

Of the admissions and re-admissions in 1921-22, natives of New South Wales numbered 789, England 212, Ireland 90, Scotland 48, other British countries, 268, foreign countries 70.

During 1921-22 the number of patients who died in mental hospitals was 606, or 8·2 per cent. of the average number resident; 614 persons, or 8·3 per cent., were discharged as recovered, and 167, or 2·3 per cent., as relieved.

The records of persons admitted during 1921-22 show that among the exciting causes of insanity intemperance in drink is most prominent, particularly among men; among predisposing causes the most important are old age, congenital defects and hereditary influence.

The average weekly cost of maintaining mental patients in Government hospitals during the year 1921-22 was 25s. 7½d. per patient, of which the State paid 21s. 6½d., the balance being derived from private contributions. The following table shows the average weekly cost per patient during the last five years :—

Year.	Annual Cost of Maintenance of Patients.	Cost of Maintenance of Patient per week.		
		To State.	Private Contributions.	Total.
	£	s. d.	s. d.	s. d.
1917	311,757	14 9·4	2 10	17 7·4
1918	335,559	15 6	2 10·4	18 4·4
1919	391,517	18 2·1	2 11·9	21 2
1920-21	512,797	23 9·9	3 3	27 0·9
1921-22	497,711	21 6·7	4 0 9	25 7 6

The increase in the cost of maintenance between 1917 and 1921 was due mainly to increased wages and to the higher cost of commodities; a decline in the prices of food, &c., in 1921-22 is reflected in the cost during that year. The cost of voluntary patients is included.

## DEAF-MUTISM AND BLINDNESS.

The number of persons who were deaf and dumb, as ascertained at the census of 1911, was 640, equivalent to one person to every 2,573 of the population, and the number of persons afflicted with blindness was 1,011, or one person in every 1,629. More recent information collected at the census of 1921 is not yet available.

The care and education of the deaf and dumb and the blind are undertaken at several institutions. The New South Wales Institution for the Deaf and Dumb and the Blind is maintained partly by Government subsidy and partly by public subscriptions; special educational courses are provided, the fees being remitted in cases of financial inability. The Sydney Industrial Blind Institute undertakes the care of the adult blind, and provides industrial training to enable them to earn a livelihood; homes for the blind are conducted in connection with this institution, and a free circulating library of embossed books is provided. Institutions for the instruction of deaf mutes are conducted by Roman Catholic religious societies at Waratah for girls, and at Castle Hill for boys.

Under the Commonwealth invalid pension system provision is made for the payment of pensions to permanently blind persons above the age of 16 years.

## WELFARE OF CHILDREN.

The following is a brief outline of the principal laws relating to the welfare of children in New South Wales.

The Children's Protection Act, 1902, and the Infant Protection Act of 1904 contain provisions for the protection of children from ill-treatment and neglect; the employment of children in dangerous occupations is prohibited, and they are not permitted to take part in public performances unless under license. The adoption of children is regulated, and the maintenance of young children, apart from their parents in foster homes or in institutions, is subject to the supervision of State Inspectors. Persons in charge of maternity homes are required to furnish particulars to the State Children Relief Board of all births occurring therein, and they must undertake the responsibility of seeing that no child is taken from a home without permission, except in the custody of the mother.

Orders of a magistrate to compel parents to meet the obligation of maintaining their children are made in terms of the Deserted Wives and Children's Acts of 1901 and 1913, and, in respect of illegitimate children, under the Infant Protection Act, 1904.

The State Children Relief Act of 1901, which consolidated Acts passed in 1881 and 1896, provides for two forms of relief in regard to neglected and destitute children, viz., (1) for those children who by reason of the death or neglect of parents and guardians, or for other reasons, have become wards of the State, and (2) the granting of assistance towards the maintenance in their own homes of the children of widows and deserted wives in necessitous circumstances.

The Neglected Children and Juvenile Offenders Acts of 1905 and 1913 relate mainly to delinquent children, and to those who through lack of parental control or through bad environment are liable to acquire criminal habits. Special courts have been established to deal with cases relating to children, and industrial schools and reformatories are maintained, also shelters for temporary detention.

The use of tobacco by juveniles and the supply of intoxicating liquor to them is prohibited under the Juvenile Smoking Suppression Act and the Liquor Act respectively; and the Public Instruction Act requires children between the ages of 7 and 14 years to attend school regularly. The conditions under which children are permitted to engage in street trading are defined by the Neglected Children and Juvenile Offenders Acts, and the employment of children in factories and industrial apprenticeship are subject to laws which have been discussed in the chapters relating to Employment and Production and to the Manufacturing Industry.

In relation to the preservation of infant life a Federal law, passed in 1912, authorises the payment of an allowance of £5 to mothers, which assists in defraying the expenses incidental to childbirth. The Notification of Births Act of 1915 requires that in proclaimed districts the health authorities must be notified within thirty-six hours of the birth of a child; by this means cases in which advice or assistance is needed are brought under cognisance at a stage when measures to safeguard the health of infants are most efficacious.

An Act was passed in 1919 to incorporate the Royal Society for the Welfare of Mothers and Babies, which had been established under the ægis of the Government in the previous year with the object of co-ordinating all measures for the welfare of mothers and babies. Associations of medical practitioners and of nurses, charitable organisations, and institutions for children are affiliated with the Society, the main objects being to save baby life, to ameliorate the conditions of life of children up to school age, and to ensure proper nursing and health conditions of mothers before and after childbirth.

#### *Maternity Allowances.*

The Maternity Allowances Act of the Commonwealth, which came into operation on 10th October, 1912, provides for the payment to mothers of a sum of £5 in respect of each birth occurring in Australia; payments are made in respect of still-born children if they are viable, but one allowance only is payable in the case of plural births. The allowances are payable only to women who are inhabitants, or who intend to settle in the Commonwealth; and they are not payable to Asiatics or to aboriginal natives of Australia or of the Pacific Islands.

The following statement shows the number of claims passed for payment in New South Wales in each year up to 31st December, 1922, in comparison with the number of confinements:—

Year.	Confinements. (excluding still- births).	Maternity Allowances.	
		Claims passed for payment.	Amount.
			£
1912, from 10th October ...	13,304	5,604	28,020
1913 ... ..	51,587	51,564	257,820
1914 ... ..	53,042	53,690	268,450
1915 ... ..	52,280	52,028	260,140
1916 ... ..	51,511	51,992	259,960
1917 ... ..	51,834	52,600	263,000
1918 ... ..	50,149	50,320	251,600
1919 ... ..	47,990	48,510	242,550
1920 ... ..	53,368	54,710	273,550
1921 ... ..	54,047	54,390	271,950
1922 ... ..	54,641	55,900	279,500
Total ... ..	533,753	531,368	2,656,540

It is apparent that all classes of the community, not only those in needy circumstances, claim the benefit provided by the Act, and since its introduction it has become customary to register births within a week, though the Registration Act allows a period of sixty days. In seven out of the last eight years the number of claims passed for payment exceeded the number of confinements; this is due mainly to the fact that still-births are not included in the number of confinements, though allowances are paid in respect of the births of viabel children.

#### *Baby Clinics and Day Nurseries.*

Facts relating to infant mortality, as shown in the chapter on Vital Statistics, indicate that a large proportion of the deaths are due to preventable causes, the result in many cases of parental ignorance. Recognising the need for reducing the wastage, the Sydney Municipal Council in 1904 inaugurated a movement for the instruction of mothers in hygiene, and appointed a trained nurse inspector to visit the homes of newly-born infants; as a result there was a marked improvement in the rate of infantile mortality in the district. Some years later a charitable organisation established a clinic where advice was given to mothers, and in 1914 the Government undertook the work and opened baby clinics in various parts of the city and suburbs.

A staff of nurses and an honorary medical officer are attached to each clinic; the nurses instruct the mothers in hygiene at the clinics and in their homes, and make arrangements for medical or dental treatment of mothers and children when necessary.

In June, 1923, there were 34 clinics, viz., 21 in the metropolitan area, 5 in Newcastle, 1 in Maitland, 2 in Cessnock, 1 in Wagga, and 4 in Broken Hill. During the year 1922 the attendances numbered 136,596, and the nurses made 60,103 visits to cases within the areas served by the clinics; the corresponding figures for the previous year were 131,845 attendances and 50,946 visits.

The Royal Society for the Welfare of Mothers and Children has established two welfare centres in the city, each with a baby clinic, day nursery, kindergarten, playground, and a milk and ice depot. The Society conducts also two training schools, where nurses may receive post-graduate training in infant hygiene and mothercraft, the course being designed for the instruction of nurses attached to baby clinics.

Three day nurseries have been established in the metropolis by the Sydney Day Nursery Association. Mothers who work outside their homes may leave their children at the nurseries during the daytime for the sum of 6d. per day; food, clothing, and medical advice are provided, also kindergarten tuition. During the year 1921 the average number under care was 140 per day.

In the outlying country districts nurses engaged by the Bush Nursing Association afford assistance to mothers and advise them as to the feeding and treatment of children.

#### *Children under State Supervision.*

The function of supervising the children under the care of the State is vested primarily in the State Children Relief Board, under the direction of the Minister for Education. The Board is appointed by the Governor; membership is limited to nine persons, but the Act does not contain any proviso as to special qualification of the members. The executive functions of the State Children Relief Department are conducted by a staff of salaried officers, including a number of inspectors.

The Board administers the State Children Relief Act, and discharges other important duties, such as the inspection and supervision under the Children's Protection Act of children placed in foster homes by their parents or employed in theatres, the licensing of private institutions for children, and the conduct in the courts of affiliation cases under the Infant Protection Act, the care of children committed to its control or released on probation by the Children's Courts, and the licensing of children engaged in street trading.

The gross amount expended by the Government during the year ended April, 1922, on account of the services of the State Children Relief Department, was £457,626, of this amount, £133,555 represented the cost of maintenance of children boarded-out apart from their parents, while allowances to widows and deserted wives towards the support of their own children amounted to £263,945. Contributions by parents and relatives and repayments of maintenance allowance amounted to £8,921.

The following statement shows the expenditure of the State Children Relief Department at intervals since 1901-02 :—

Year. ended April.	Boarding-out.		Cottage Homes.	Children's Protection Act and Supervision of School Attendance & of Juvenile Offenders.	Total Expenditure.	Contrib- utions by Parents and other Revenue.	Net Expenditure by Government.
	State Wards.	Children of Widows, etc.					
	£	£	£	£	£	£	£
1902	43,010	19,262	3,371	73	65,716	1,542	64,174
1912	46,001	33,742	13,243	10,187	103,173	4,361	98,812
1916	57,996	76,989	11,599	10,047	156,631	6,357	150,274
1917	64,378	79,405	17,892	12,828	174,503	5,880	168,623
1918	63,534	89,364	14,428	16,030	183,356	6,580	176,776
1919	73,680	108,228	12,729	16,870	211,507	7,670	203,837
1920	85,554	133,390	20,628	17,794	257,366	6,674	250,692
1921	109,963	223,583	27,661	29,445	390,652	7,713	382,939
1922	133,555	263,945	30,185	29,941	457,626	8,921	448,705

The increase in recent years in the amount expended in connection with the children boarded-out is due partly to an increase in the number of children but in a greater degree to increases in the rates of payment, owing to higher cost of living. Thus, in April, 1916, the average rate of payment for children boarded-out apart from their parents was about 5s. 6d. per week, and for children with their mothers 4s. 6d.; in April, 1922, the weekly rate was 15s. up to one year of age and 10s. from 1 to 14 years.

The number of children under the supervision of the State Children Relief Board, classified in accordance with the statutory provisions under which they are controlled, is shown below; the number as at 5th April, 1922, was 21,476, as compared with 22,252 in the previous year :—

Classification.	1911-12.	1915-16.	1919-20.	1920-21.	1921-22.
State Wards ... ..	4,677	5,081	4,979	5,403	5,439
Children of Widows, &c. ... ..	4,453	7,310	10,797	12,839	11,854
In institutions (Infant Protection Act) ...	263	500	465	579	689
Foster homes (Children's Protection Act) ...	559	693	355	294	290
Employed in theatres ... ..	216	180	320	400	280
Engaged in street-trading ... ..	856	695	1,216	1,058	1,543
On probation from Children's Courts ...	1,148	1,566	1,783	1,679	1,381
Total ... ..	12,172	16,025	19,915	22,252	21,476

There are a number of children in institutions conducted by religious bodies and other organisations where they have been placed by their guardians in preference to being boarded-out under the State system; some of the institutions receive also children from the Children's Courts, and those in which children under the age of 7 years are received must be licensed under the Acts administered by the State Children Relief Department. In a few cases the parents contribute towards the support of the children, but usually they are maintained by the organisations which conduct the establishments.

At the end of the year 1921 there were 3,003 children in these charitable institutions.

Institutions.	1911.	1916.	1921.		
			Boys.	Girls.	Total.
General Public ... ..	467	318	215	190	405
Church of England... ..	207	162	103	223	326
Roman Catholic ... ..	1,051	1,178	654	921	1,575
Methodist ... ..	27	127	4	51	55
Presbyterian ... ..	5	53	221	139	360
Salvation Army ... ..	48	179	170	109	279
Hebrew ... ..	...	...	2	1	3
Total ... ..	1,805	2,017	1,369	1,634	3,003

The figures in the foregoing table include the inmates under 7 years of age who were under the supervision of the State Children Relief Department.

Particulars are shown below regarding the operations during the last five years under the clauses of the Children's Protection Act, which require the registration of foster homes in which children up to the age of 3 years are placed for payment.

Particulars.	1917.	1918.	1919.	1920.	1921.	1922.
Foster Homes Registered ... ..	126	110	40	30	26	57
Children Registered ... ..	1,112	927	762	693	612	638
„ Died ... ..	34	8	13	15	11	1
„ Discharged from Super- vision ... ..	579	488	391	334	311	312
„ under Supervision at 31st December ... ..	499	431	355	294	290	325

#### *State Wards.*

In New South Wales it is an accepted principle that when it is necessary for the State to interfere with the conditions of family life in the children's interests, the children should be reared in the natural surroundings of a home; therefore the boarding-out system has been adopted in regard to State wards. Treatment in institutions is restricted to special cases.

The boarding-out system was inaugurated in 1881, control being vested in the State Children Relief Board.

The supervision is undertaken by salaried inspectors, whose efforts are supplemented by honorary officers. Women inspectors visit infants placed out apart from their mothers; and all such infants in the Metropolitan area must be submitted to medical examination every fortnight during the first twelve months of life.



The children are boarded-out until they are 14 years of age to approved persons, the maximum number of children under the care of one guardian being three, except in cases of families comprising a greater number, brothers and sisters being placed usually in the same home. Preference is given to districts with favourable climatic conditions and with facilities for education and for supervision by inspectors.

When they reach the age of 14 years the children may be apprenticed with suitable employers for a period not exceeding five years, or they may be discharged from the control of the Board or dealt with in any other way which the Board may determine.

For apprentices, the terms of indenture prescribe a wage payment and pocket-money on a specified scale, the wages being banked half-yearly to the credit of the apprentice; one-third of the accumulated amount is paid over on completion of the apprenticeship, the balance remaining at interest till age 21 is attained, unless exceptional circumstances arise, when the Board may allow the money to be paid earlier. The majority of the girls are apprenticed in domestic service, and the boys to farmers, orchardists, and artisans in country districts.

The Board may arrange the permanent adoption of orphan children or of those surrendered for adoption. The law, however, does not prohibit the private arrangement of adoptions, and many children are adopted without the cognisance of the Board.

The State wards in April, 1922, consisted of 3,129 boys and 2,310 girls and they were distributed as follows:

	Boys.	Girls.	Total.
Boarders—Subsidised ... ..	1,908	1,289	3,197
Unsubsidised ... ..	120	163	283
Adopted ... ..	94	161	255
Apprentices ... ..	589	448	1,037
In cottage homes ... ..	108	90	198
In hospitals ... ..	96	107	203
In dépôts, &c. ... ..	214	52	266
Total ... ..	3,129	2,310	5,439

The statement shows that of 5,439 children under care, 4,772 were living in private homes as boarders, apprentices, or adopted children, and apart from those in hospitals or in depots awaiting classification or transfer, less than 200 were in institutions.

#### *Relief of Children of Widows, etc.*

A most important provision of the State Children Relief Act provides for contributions towards the support in their own homes of the children of widows in necessitous circumstances and of wives deprived of their husband's support through desertion, illness, infirmity, or imprisonment. There has been a substantial increase in the number of applications for assistance during recent years on account of the high prices of food and other necessities.

In April, 1922, the number of mothers receiving this form of relief was 5,427, including 2,638 widows, and 2,789 wives deprived of their husbands' support by reason of desertion, illness or imprisonment. The number of children in respect of whom payments were made was 11,854.

There is no law in operation in New South Wales to compel relatives, other than parents, to contribute towards the cost of maintenance, but in cases of desertion of wife or of legitimate children, the husband or father may be ordered, in terms of the Deserted Wives and Children Acts, to pay

weekly or monthly contributions for their support. Cases in relation to illegitimate children are dealt with under the Infant Protection Act; the father may be ordered to pay the expenses incidental to birth and to make periodical payments for maintenance; in certain cases the mother also may be required to contribute. For disobedience of or non-compliance with orders under these acts offenders may be fined, or they may be committed to prison, and from the value of their work while in prison the cost of their upkeep may be deducted and the balance applied to the satisfaction of the orders.

The following statement shows the number of cases in respect of wife and child desertion dealt with in the Courts of Petty Sessions and the Children's Courts during the year 1921 :—

Cases.	Applications for Orders.			Non-compliance with Orders.		
	Order made.	Order refused.	Case withdrawn.	Order obeyed subsequently.	Defendant imprisoned.	Case withdrawn or dismissed.
For maintenance—Wife ..	958	376	630	1,508	331	899
Child ...	662	177	172	1,674	122	745
For expenses (Infant Protection Act) ... ..	210	59	43	11	3	6
Total ... ..	1,830	612	845	3,193	456	1,650

In regard to eight applications for orders, the mothers were charged with desertion: in 6 cases an order was made, and 2 cases were withdrawn. Only 1 woman was charged with non-compliance with an order, and the charge was withdrawn.

#### *Delinquent Children.*

Cases of juvenile offenders under the age of 16 years are dealt with in the Children's Courts, by magistrates with special qualifications for the treatment of delinquent children. Leniency is an outstanding feature in the treatment of the young offenders, and a large number are released after admonishment, or on probation, committal to an institution being a final resort. The children brought before the courts are classified into thirteen distinct groups, according to the special treatment they require, consideration being given to the character of the child and the circumstances surrounding the committal of the offence, the home environment, the character of the parents, and the nature of their control.

While awaiting the determination of their cases, or transfer to institutions, the children are accommodated in shelters in proximity to the courts.

The disposal of the children brought before the Metropolitan Children's Court during the year ended April, 1923, is shown in the following statement :—

Disposal.	Boys.	Girls.	Total.
Released on Probation to Parents ... ..	439	35	474
“ “ “ other Persons ... ..	64	28	92
Committed to care of State Children Relief Board ... ..	6	9	15
“ “ Truant School ... ..	80	...	80
“ “ Other Institutions ... ..	223	29	252
Fined... ..	337	2	339
Charge Withdrawn ... ..	939	112	1,051
Charge Dismissed ... ..	31	4	35
Total ... ..	2,119	219	2,338

Further particulars regarding offenders charged at the Children's Courts are given in the chapter of this volume relating to Law Courts.

The children on probation are under the supervision of the State Children Relief Department.

The Neglected Children and Juvenile Offenders Act provides that children committed to institutions may be detained in custody until the expiration of the period specified by the Court, or until reaching the age of 18 years; they may be indentured as apprentices with suitable employers or restored to the custody of parents or guardians.

A Truant School is conducted at Guildford for the detention of boys under 14 years of age who are persistent truants; the average period of detention is about two months. The gross enrolment during 1922 was 213, and the average daily attendance 57.

The other State institutions for the reformation and training of delinquent children are the Farm Home for Boys at Mittagong, to which reference is made above, the Gosford Farm Home for Boys, and the Girls' Industrial School at Parramatta. Under certain conditions children may be committed to approved institutions established by the religious organisations.

The Mittagong Farm Home is primarily for the reception of children who require treatment before being released on probation, and others guilty of minor delinquencies; the Gosford institution is for older boys, who need stricter discipline or who show tendencies liable to be developed into criminal habits, and for those who have failed to respond to probation or to treatment in the Mittagong Farm Home. At Gosford 152 boys were admitted during the year ended April, 1923, and 165 were discharged, including 119 who were released on probation; the number at the end of the year was 145. At Mittagong there is a daily average of 320 boys, about 600 being admitted each year. The Industrial School for Girls at Parramatta is divided into two branches for the purpose of classifying the inmates, and a training home is attached; the institution receives uncontrollable girls between the ages of 13 and 16 years. During the year 1922-23 the number of girls admitted was 60, and 60 were discharged; the number remaining at 5th April, 1923, was 143.

#### *Mentally-deficient Children.*

There is not a comprehensive system for the treatment of feeble-minded children in New South Wales, though it is recognised that much juvenile delinquency is the result of mental deficiency, and a number of the children brought before the Children's Courts are tested mentally by medical officers.

Special accommodation is available in the State mental hospitals for children who may be classed as lunatics or idiots; and four of the cottage homes for State wards are reserved for the feeble-minded, the older boys being trained in such trades as bootmaking, tailoring, toymaking, and carpentering, as well as in out-door work. Provision is necessary, however, for all children who are incapable of acquiring education in the ordinary schools, but with special tuition may be taught to engage in useful employment under supervision. The matter is receiving attention, and in July, 1923, a Board was appointed to consider methods of treating mental deficiency in children.

#### *Employment of Children.*

In previous chapters of this volume particulars are shown regarding the employment of children in factories and as apprentices. There are two classes of employment in which children may not be employed except under license, viz., in public theatrical performances and in street trading.

Theatre licenses are issued under the Children's Protection Act; in the Metropolitan district they may be issued to children over 7 years of age, but children under 14 years are not allowed to travel with touring companies. The licenses are issued subject to the condition that provision be made for the health of the children, and they may be rescinded at any time.

Licenses to engage in street trading are issued under the Neglected Children and Juvenile Offender's Act, street trading being defined as hawking newspapers, matches, flowers, or other articles, singing, or performing for profit, or any like occupation conducted in a public place. Girls are not allowed to engage in street trading, and all boys under 16 years must be licensed. The minimum age at which a license is granted is 12 years, and in case of certain occupations, 14 years. Licenses are renewable half-yearly, and licensees are required to wear a metal arm-badge whilst trading.

Precautions are taken by supervisors to ensure the regular school attendance of licensees under 14 years of age. The trading hours prescribed for boys between the ages 12 and 14 are from 7 a.m. to 7 p.m., and for boys over 14 years of age, from 6 a.m. to 10 p.m.

Particulars relating to the licenses issued during the last seven years are shown below, the figures for theatre licenses being for the calendar years stated, and those relating to street trading licenses for the years ended three months later.

Year.	Theatre Licenses Issued.	Street Trading Licenses.			
		Applications by Boys.			Licenses Granted.
		Under 14 years of age.	14 to 16 years of age.	Total.	
1916	122	445	340	785	663
1917	240	505	389	894	782
1918	276	570	420	990	902
1919	320	882	374	1,256	1,216
1920	400	749	369	1,118	1,058
1921	280	990	595	1,585	1,543
1922	580	1,169	721	1,890	1,836

The majority of the street trading licenses are issued to newspaper vendors; 1,814 applications in period ended March, 1923, were for hawking newspapers, and 76 for hawking other articles.

#### *Medical Inspection of School Children.*

A system of medical inspection of school children was organised in New South Wales in 1913, and arrangements have been made to examine each child at least twice during the period of school attendance (which is compulsory between the ages of 7 and 14 years). The inspections are conducted by a staff attached to the Department of Education consisting of 18 medical officers, 19 dentists (including 8 only partly employed in school work) 10 nurses, and 13 dental assistants.

Facilities are provided for the treatment of defects disclosed by the inspection; in the Metropolitan district numbers of children are treated as out-door patients at hospitals, and a school dental clinic has been established to remedy dental defects. In the country districts a travelling hospital supplies the needs of remote and sparsely-populated districts, and 6 travelling dental

clinics visit the larger centres. The travelling hospital is staffed by a medical officer, 2 dentists, a nurse and a dental assistant. During 1922 the number of children examined by the staff of the travelling hospital was 2,942, and 14,875 were treated by the travelling dental clinics.

During the year 1921 the number of school pupils examined was 61,545, viz., 11,552 in the Metropolitan area, 31,946 in the country towns, and 18,047 in rural areas; 29,379 children, or 47 per cent., were found to have defects; the majority were dental cases, viz., 22,169. Preliminary figures for the year 1922 show that 63,554 pupils were examined, viz.:—Metropolitan 12,377; country towns, 35,174; and rural areas, 16,003. The children found to have defects numbered 31,002, or 49 per cent; the number of dental cases was 24,057, defects of the eyes 3,005, nose and throat 8,682, of which 1,319 were adenoids.

#### CHARITABLE RELIEF.

In addition to hospitals for the treatment of sickness or disease, there exist both in the metropolis and in the country other institutions, such as homes for the aged and for children; for granting casual aid to indigent persons; and for the help of discharged prisoners.

The State maintains five asylums, others are maintained partly by State aid and partly by private contributions, and a few are wholly dependent on private aid.

Four of the State asylums are for men and one is for women. These institutions were established as asylums for aged and destitute persons, but since the introduction of the old-age pension system the character of the work of the institutions has changed considerably; they are developing into hospitals, and are used to a large extent for the treatment of chronic ailments, and contain special wards for persons suffering from cancer, tuberculosis, and venereal diseases.

The average number resident in the State asylums during the year 1921 was 3,158, as compared with 3,030 during the previous year; the average weekly cost per inmate was 15s. 9d. In the hospitals attached to these institutions 5,872 cases of illness were treated during 1921—males 4,634, and females 1,238—and at the end of the year 1,256 cases remained under treatment.

The total number of inmates in the charitable institutions during the year 1921 was 26,033 persons, including 10,182 children; the discharges numbered 16,878, and the deaths 1,025; the number remaining at the end of the year was 8,130, viz., 2,946 men, 1,579 women, and 3,605 children. The revenue amounted to £848,084, including State aid, £630,393; and the expenditure to £845,324; the value of the outdoor relief afforded by the institution was estimated at £49,302.

A number of societies are active in the matter of charitable relief, *e.g.*, nursing, ambulance, and shipwreck relief; and in many suburbs and country towns benevolent societies have been formed for the relief of local distress. The District Nursing Association and the Bush Nursing Association engage nurses to visit the sick, gratuitously if needed, the former in the Metropolitan and the latter in the country districts. Public charitable collections are made periodically for the relief of distress or with the object of increasing the revenue of hospitals and charitable agencies. In the Metropolitan district the Hospital Saturday Fund collected voluntary subscriptions and donations amounting to £29,725, and the United Charities Fund £6,794, during 1921–22.

The following is a comparative statement of the revenue and expenditure of the charitable institutions and societies:—

Particulars.	1901.	1911.	1916.	1920.	1921.
Institutions and Societies ... ..	160	199	202	200	204
Revenue—	£	£	£	£	£
State Aid ... ..	153,752	192,941	317,429	604,160	668,044
Subscriptions, etc. ... ..	34,906	78,786	109,901	161,917	229,547
Other ... ..	44,999	67,519	81,841	97,196	68,363
Total ... ..	233,657	339,246	509,171	863,273	965,954
Expenditure—					
Buildings and Repairs ... ..	40,247	21,063	24,617	34,238	41,771
Maintenance, Salaries, Wages ...	174,679	293,460	448,097	775,879	871,475
Other ... ..	39,008	11,142	24,981	44,121	39,371
Total ... ..	253,934	325,665	497,695	854,238	952,617

Financial aid from the State amounted to £668,044 in 1921, and represented 69 per cent. of the total revenue.

#### PROTECTION OF THE ABORIGINES.

At a census taken by the Aborigines Protection Board on 4th April, 1922, there were in New South Wales 7,374 aborigines, viz., 1,231 full-bloods and 4,740 half-castes, 1,054 quadroons, and 349 octoroons.

The protection of the aboriginal natives of New South Wales is the function of a Board consisting of the Inspector-General of Police and other members, up to 10 in number, appointed by the Governor.

An area of over 21,000 acres has been set apart for aborigines in various localities. Dwellings have been erected on the reserves; the residents are encouraged to work, and assistance in the form of food and clothing is supplied when necessary. The average number receiving aid during the year 1921, was 1,957.

Aboriginal children are required to attend school until the age of 14 years and a number of schools have been established for their exclusive use; the attendance in 1921 numbered 716. The Board may assume control of the children, and apprentice them, or place them in training homes.

The expenditure by the Aborigines Protection Board during the year ended 30th June, 1922, amounted to £44,255, including £23,176 for general maintenance, £8,058 for the purchase of stores, £8,292 for educational purposes, and £731 for medical attention. An amount of £3,797 was expended in connection with products raised on the reserves, and £5,203 were received as revenue from sales; the net expenditure during the year was £39,052.

#### PENSIONS.

No general pension system is in operation in New South Wales, but pensions are provided for the aged, for the permanently invalided, for persons incapacitated during war service, and for the dependents of deceased soldiers and sailors; provision is made also for superannuation in some sections of the Government services. Information relating to these pensions is shown in the following pages. Several of the banking companies and other firms have made arrangements for the superannuation of employees, but particulars are not available.

*Old Age Pensions.*

The payment of old-age pensions in New South Wales was initiated by the State Government on 1st August, 1901. The system was transferred subsequently to Federal control, and the Commonwealth Government commenced to pay old-age pensions to persons over 65 years of age on 1st July, 1909, and to women on attaining the age of 60 years on 15th December, 1910. The total amount paid for old-age pensions for the period of nine years during which the State system was in operation was £4,009,127, and the cost of administration £165,560 approximately. On introduction of the Commonwealth administration, 21,292 State pensions were transferred.

The conditions governing the payment of old-age pensions under the Commonwealth are similar to those under the State Act; the age qualification is 60 years for women and 65 years for men, with a reduction to 60 years in case of men permanently incapacitated; the period of residence qualification is twenty years in Australia, but absences amounting in the aggregate to one-tenth of the total period of residence are permitted. Naturalised persons are eligible for pensions, but aliens and aboriginal natives are disqualified.

The maximum pension was £26 per annum until 12th October, 1916, when it was raised to £32 10s. A further increase to £39 per annum was made as from 15th January, 1920, and on the 31st August, 1923, it was raised to £45 10s. A proportionate reduction is made in respect of any income or property of the claimant, so that the pensioner's income with the pension shall not exceed £78 per annum in the case of unmarried pensioners, whether male or female. In computing income, benefits accruing from friendly societies are not to be reckoned as income, nor gifts nor allowances from children or grandchildren; in assessing the value of property, the home in which the pensioner permanently resides is not included. Money payable to a pensioner while he is an inmate of a benevolent asylum or hospital may be paid to the institution for his benefit.

The following statement shows the applications received in New South Wales, the number of old-age pensions current, and the average rate and total liability for old-age pensions in recent years:—

Year ended 30th June.	New Claims.	Old-age Pensions current in New South Wales at 30th June.			Average Weekly Rate of Pension, as at 30th June.	Estimated Annual Liability, as at 30th June.	Estimated Annual Liability per head of Population, as at 30th June.
		Male.	Female.	Total.			
1912	4,763	13,639	16,029	29,668	s. d. 9 7	£ 734,526	s. d. 8 7
1918	4,689	14,795	20,283	35,078	12 1	1,098,344	11 5
1919	4,634	14,979	20,543	35,522	12 0	1,112,098	11 4
1920	6,231	15,515	21,843	37,358	14 6	1,405,534	13 9
1921	5,727	16,033	23,004	39,037	14 1	1,428,258	13 8
1922	5,280	16,498	23,567	40,065	14 3	1,484,678	13 11
1923	5,851	17,016	24,204	41,220	14 2	1,521,078	13 11

The old-age pensioners in New South Wales, as at 30th June, 1923, represented 18·8 per thousand of population, and in the Commonwealth as a whole

19.1 per 1,000. It is estimated that approximately one-third of the persons having the requisite age qualification are in receipt of old-age pensions.

#### *Invalid Pensions.*

Invalid pensions were first paid in New South Wales under the Invalidity and Accidents Pensions Act, passed by the State Parliament in 1907, which allowed pensions payable from Consolidated Revenue up to £26 a year to persons over 16 years of age permanently incapacitated for any work. The State system was maintained until the payment of invalidity pensions was undertaken by the Commonwealth on 15th December, 1910. The pensions paid during the currency of the State Act amounted to £235,012.

Pensions, up to a maximum rate of 17s. 6d. per week, are payable to persons who have resided for at least five years and have become incapacitated or blind in Australia, also to persons permanently incapacitated or blind by reason of congenital defect if they were brought to Australia before the age of 3 years. Invalid pensions are not payable to persons whose income or property exceeds the limits prescribed in the case of applicants for old-age pensions, or whose relations adequately maintain them. Aliens, Asiatics (except those born in Australia), and aboriginal natives of Australia, Africa, Pacific Islands, and New Zealand are not qualified to receive invalid pensions.

Particulars of transactions in New South Wales during the last five years are shown below in comparison with 1912, the first complete year of Commonwealth control.

Year ended 30th June.	New Claims.	Invalid Pensions current in New South Wales at 30th June.			Average Weekly rate of Pension as at 30th June.	Estimated Annual Liability as at 30th June.	Estimated Annual Liability per head of Population as at 30th June.
		Males.	Females.	Total.			
1912	1,784	2,549	2,278	4,827	s. d. 9 9	£ 121,836	s. d. 1 5
1918	2,582	5,669	6,500	12,169	12 4	390,442	4 1
1919	2,659	6,086	7,012	13,098	12 4	419,692	4 3
1920	3,489	6,583	7,754	14,337	14 9	550,134	5 5
1921	3,278	7,016	8,371	15,387	14 9	588,588	5 8
1922	2,924	7,166	8,731	15,897	14 8	606,788	5 8
1923	2,529	7,357	8,995	16,352	14 8	623,298	5 8

The invalid pensions current in New South Wales on 30th June, 1923, represented 7.5 per thousand of population, compared with 7.1 for the Commonwealth. On 30th June, 1912, the corresponding rates were 2.9 and 2.4 respectively.

The total expenditure by the Commonwealth on invalid and old-age pensions during the year ended 30th June, 1923, was £5,511,926, of which an amount of £5,337,936 was paid as pensions, and £86,080 to benevolent asylums for the maintenance of pensioners; the cost of administration amounted to £87,910.

#### *War Pensions.*

The Australian Soldiers' Repatriation Act, 1920, passed by the Commonwealth Parliament, provides for the grant of pensions upon the death or incapacity, as the result of warlike operations, of members of the Commonwealth naval or military forces. The general administration of the Act is entrusted to three commissioners appointed by the Governor-General, and a Board of three members in each State.



The rates of pension payable on total incapacity range from £4 4s. to £6 6s. per fortnight, according to rank; in cases of partial incapacity the rates are assessed by the Commissioners. The wife of a totally incapacitated member receives a pension ranging from £1 16s. per fortnight to £3 per fortnight; widows receive from £2 7s. to £6 per fortnight; widowed mothers receive pensions ranging from £2 to £6 per fortnight, and a pension is payable on account of each child under 16 years of age.

The loss of two or more limbs, of both legs, feet, arms, hands, or eyes, or of arm and leg, hand and foot, or one eye together with leg, foot, hand, or arm, or the loss of all fingers and thumbs; or lunacy; or wounds, injuries; or disease involving total permanent disabling effects, and very severe facial disfigurements, are regarded as constituting total incapacity. The amputation of a leg at the hip, or an arm at the shoulder joint, is held to constitute an incapacity of 80 per cent., while the loss of leg, foot, hand, or arm otherwise constitutes 75 per cent. disablement. Blinded soldiers receive a special pension at the rate of £8 per fortnight. A lump sum may be paid instead of a pension which is not more than 30 per cent. of the rate for total incapacity.

The number of pensioners under the War Pensions Act as at 30th June, 1922, was as follows:—

Pensioners.	New South Wales.		Commonwealth.	
	Number of Pensioners.	Average Fortnightly Rate.	Number of Pensioners	Average Fortnightly Rate.
Incapacitated Soldiers ... ..	24,971	£ s. d. 1 14 9	76,249	£ s. d. 1 13 1
Dependents of Deceased Soldiers ... ..	12,936	} 0 19 1	47,250	} 0 18 1
Dependents of Incapacitated Soldiers ... ..	29,951		101,873	
Total ... ..	67,858	1 4 10	225,372	1 3 2

At 30th June, 1922, there were 67,858 war pensions current in New South Wales, and the annual liability was estimated to be £2,189,798. The actual expenditure on account of pensions in New South Wales during the year ended 30th June, 1922, was £2,294,258, the total cost to the Commonwealth Government being £7,198,588, including cost of administration, £170,209.

#### *Government Service Pensions.*

The existing pension funds for employees of the State Government of New South Wales are the Public Service Superannuation Fund, the Police Superannuation and Reward Fund, and the Government Railways Superannuation Fund; and an Act which provides for the superannuation of employees of the Commonwealth Government came into operation on 22nd November, 1922. All these funds are maintained partly by deductions from officers' salaries and partly by grants from the public revenue.

The first Public Service Superannuation Fund in New South Wales was established by the Civil Service Act, 1884, but in 1895 the admission of new contributors was discontinued and the existing contributors were given the option of withdrawing from the fund. The officers who elected to dis-

continue their contributions are entitled under prescribed conditions to receive refunds and gratuities on retirement; officers who have continued to contribute are entitled to an annual pension equal to one-sixtieth of the average annual salary for the last three years' service, multiplied by the years of service, not exceeding forty, the pensions being payable on retirement through incapacity or at age 60, or on abolition of office. The amounts payable from the fund in excess of contributions are paid out of Consolidated Revenue. During the year 1921-22 the expenditure was £181,703, consisting of pensions, £170,510, and refunds and contributions, £11,193; contributions by public servants amounted to £9,293. On 30th June, 1922, there were 809 officers in receipt of pensions amounting to £153,024; in addition, 150 officers, who had been transferred to the Commonwealth Service, were receiving pensions amounting to £32,909, a proportion being payable by the State and the balance by the Commonwealth Government. Certain Government officers received pensions from an annual appropriation in terms of the Constitution Act; the pensions paid during 1921-2 amounted to £1,333.

The existing Public Service Superannuation Fund was constituted by the provisions of the Superannuation Acts, 1916 and 1918, which provide a scheme of pensions and other benefits for employees of the New South Wales Government and other public bodies, except those subject to the Railway Service and Police Superannuation Acts. One-half of the cost of the scheme is borne by the employees, except where otherwise provided, and the balance by the employers. The age of retirement is 60 years, but women may elect to contribute for retirement at age 55; upon the death of a contributor or pensioner his widow receives one-half of the amount of pension for which he has contributed, and £13 per annum for each child under 16 years of age. Contributions by employees are compulsory and vary in accordance with the age and salary of the contributor. Tables showing the rates of contributions and of pensions were published in the 1919 edition of this Year Book.

Certain sections of the Superannuation Act, which conferred pension rights without contributions on employees who had reached the age of 60 years, came into force in 1916, and the other provisions on 1st July, 1919.

At 30th June, 1922, the number of employees contributing to the fund was 18,080, viz., 11,633 men and 6,447 women; the pensions in force in respect of contributors numbered 434, amounting to £27,493 annually; and 1,534 pensions were payable in respect of persons who had not contributed to the fund, the annual amount being £107,966. During the year ended 30th June, 1923, the receipts of the fund amounted to £759,245, including £254,845 contributed by employees and £425,761 by employers; the funds of the Board at the end of the year amounted to £3,657,457, including £1,781,268 invested in securities and £1,854,072 due for employers' contributions.

A pension fund for the police force was established in 1899, amending legislation being passed in 1906. Annual contributions by members of the service are at the rate of 4 per cent. of salary; other sources of revenue are penalties imposed on members of the police force, penalties and damages awarded to the police as prosecutors, and the proceeds of the sale of unclaimed goods in possession of the police. The amount of pension payable to members who entered the police service prior to 1906 is graduated in accordance with length of service; the retiring age is 60 years, except in cases of incapacitation, but under prescribed conditions the services of any member of the force may be retained until he reaches the age of 65 years. During the year ended 30th June, 1922, the receipts of the Police Superannuation and Reward Fund amounted to £149,502, including deductions from salaries, £58,502, and special appropriation from Consolidated Revenue, £91,000;

the disbursements, £150,305, included pensions, £146,825; gratuities £3,130; and miscellaneous, £350.

The Railway Service Superannuation Fund was established in October, 1910; the contributions from employees of the Railway and Tramway services are at the rate of  $1\frac{1}{2}$  per cent. of salary, and the State provides all that is necessary beyond such contributions. The amount of pension payable is one-sixtieth of the average annual salary during term of service, multiplied by the number of years of service, the maximum pension being two-thirds of the average salary. At 30th June, 1922, there were 41,488 contributors; the number of pensions in force was 2,239, amounting in the aggregate to £164,134 per annum. The average rate of pensions was £73 per annum. Since the inception of the fund 3,041 pensions have been granted, and 726 pensioners have died; 71 officers under 60 have been re-employed, and 5 pensions have been written off the books. During the year 1921-22 the receipts of the fund amounted to £155,700, including contributions by employees, £154,853; the disbursements, representing pensions, gratuities, refunds, &c., amounted to £170,188.

### THRIFT.

The wages of even the lowest paid adult worker in New South Wales, as fixed by the Board of Trade, includes an allowance for life assurance, contributions to friendly societies, amusements, tobacco, intoxicating liquors, etc.; thus a widespread opportunity is afforded for thrift. Evidences that thrift is practised extensively are found in the strong position of friendly societies—both in membership and finances; in the increasing proportion of savings bank depositors and larger average amounts at credit; in the flourishing condition of life assurance institutions, and in the growth of Starr-Bowkett Building Societies and co-operative trading societies.

### FRIENDLY SOCIETIES.

Friendly Societies for many years have exercised a strong influence for good among the industrial classes by inculcating habits of thrift, and by preventing and relieving distress.

So long ago as 1834 the first friendly society in New South Wales, the Australian Union Benefit Society, was established, and it is still operating.

The earliest societies were founded by former members of English orders who had emigrated to Australia before the business of friendly societies in Great Britain was placed on a scientific basis, and subjected to legal regulation. The first bodies, therefore, performed their functions with little supervision until 1899, when an Act of Parliament conferred on the Registrar power to inspect lodge-books and to prosecute in cases of defalcation, and authority to enforce the adoption of an adequate scale of contributions. In this way stability was ensured, and subsequent improvements in the administration have placed friendly societies on a sound basis.

All legislation affecting friendly societies was consolidated in the Act of 1912, but two amendments were made in 1913 and further amendments in 1916 and 1920. The more important provisions of the various Acts were outlined in the 1921 issue of this Year Book at page 483.

The benefits assured are fairly uniform in all societies, and consist usually of medical attendance and medicine for a member and his family, with sick pay for the member, and funeral allowances for the member and his wife. The average sickness benefit is 21s. per week during the first six months of illness, 10s. 6d. during the next six months, and 5s. per week during the remainder of illness, this last provision being rendered possible by the system of State subvention, of which more detailed mention is made later. There is

a tendency to increase the sickness benefit and in several societies members are permitted to contribute for additional benefits up to 35s. per week. The funeral benefits range usually from £10 to £40 at death of the member, according to the period of membership, and a contingent benefit of £10 or £15 is payable on death of the wife. In several societies members may assure for higher sums, and in two of them it is possible to assure for £200, the maximum allowed by law. A separate benefit for widows of members—usually £10—may be assured in most of the societies for a stated contribution.

The societies may be divided into two classes, viz., Friendly Societies proper, and Miscellaneous Societies, whose objects bring them within the scope of Friendly Societies' legislation, but whose benefits differ somewhat from those of ordinary Friendly Societies.

At 30th June, 1922, there were 56 societies, including 20 Miscellaneous: 15 possessed branches, and 41, including 2 with juvenile branches, were classed as Single Societies. No new societies were registered during the twelve months ended 30th June, 1922, but three were closed.

The following summary shows the branches, membership, and funds as at 30th June, 1922 :—

Classification.					Societies and Branches.	Members.	Funds.
Friendly Societies Proper—					No.	No.	£
Affiliated	...	...	...	...	2,035	205,196	2,515,957
Single	...	...	...	...	23	3,937	62,980
					2,108	209,133	2,578,937
Miscellaneous Societies					20	108	21,848
Total					2,128	209,241	2,600,785

The societies classified as " Friendly Societies proper " offer such a wide range and appeal so strongly to individual sympathies that the field of operations for new societies is limited, and only one new society has been established since 1913.

The number of members has grown rapidly since 1899, when societies were first subjected to supervision by the Registrar. In that year there were 78,245 members, equal to 5·9 per cent. of the population, and thereafter a continuous development proceeded until the outbreak of war, when the number declined owing to enlistments and, subsequently, through deaths on active service. Each year since the termination of the war has shown an increase, however, and the results of the eighteen months ended 30th June, 1921, and for the year under review, indicate a return to the progress of pre-war years. This growth and the decline during the war period are shown in the following table :—

Year.	Aggregate Membership.		Year.	Aggregate Membership.	
	Members.	Percentage of Population.		Members.	Percentage of Population.
1899	78,245	5·9	1916	178,877	9·5
1905	101,463	7·0	1917	177,602	9·2
1910	149,579	9·1	1918	180,896	9·2
1913	188,590	10·2	1919	184,174	9·0
1914	182,325	9·7	1921*	199,688	9·5
1915	178,705	9·4	1922*	209,133	9·7

\* As at 30th June.

The number of members entitled to benefits at 30th June, 1921, was 183,344, the remainder being ineligible on account of brief membership or arrears of contributions. The benefits of medical attendance and medicine accrue also to the member's family, but such persons are not included in the membership. It is estimated that probably 600,000 persons directly or indirectly share in these benefits.

The membership at 30th June, 1922, comprised 177,503 men, 15,004 women, and 16,626 juveniles. As compared with the membership at 30th June, 1921, there were increases of 6,015 men, 1,581 women, and 1,849 juveniles, the total net increase being 9,445 members. During each of the four years prior to 1918 there were decreases in the male membership attributable directly to the war.

Information regarding receipts and expenditure of Friendly Societies, and the accumulated assets, may be found upon reference to Part Private Finance of this Year Book.

#### *Miscellaneous Friendly Societies.*

In addition to the Friendly Societies proper there were at 30th June, 1922, twenty miscellaneous societies registered under the Friendly Societies Act. Eighteen were medical institutions or dispensaries which supply medicine to all members whose names have been placed on their lists by contributing branches, and in some cases arrange for medical attendance.

The receipts of the dispensaries during the twelve months ended 30th June, 1922, were £46,931, and the expenditure was £43,358, so that there was an excess of receipts amounting to £3,573. These bodies have received liberal grants from the Government, and with this assistance have been able to purchase land and to erect buildings, the shares of the subscribing branches being covered by the issue of interest-bearing debentures; but in addition to making the necessary interest payments, most of the dispensaries have been enabled to make substantial reductions in the principal.

The following particulars regarding Miscellaneous Friendly Societies relate to the year ended 30th June, 1922 :—

Classification.			Dispensaries.	Other Miscellaneous Societies.	Total.
Societies	...	No.	18	2	20
Membership	...	No.	...	108	108
Receipts	...	£	46,931	138	47,069
Expenditure	...	£	43,358	719	44,077
Funds	...	£	21,576	272	21,848

Dispensaries comprise 90 per cent. of the Miscellaneous Societies, and their scope was extended largely by the amending Act of 1920.

#### *State Subvention of Friendly Societies.*

To enlarge the sphere of usefulness of the Friendly Societies the Subvention to Friendly Societies Act, 1908, now consolidated with the Friendly Societies Act, assured to the societies which might elect to be bound by its provisions, the following monetary benefits payable from the Consolidated Revenue of the State :—

##### 1. Sickness pay—

- (a) One-half of the cost in each year in respect of continuous sickness after twelve months from the commencement of such sickness, for male members less than 65, and for females less than 60 years of age—provided that the maximum cost to the State must not exceed 5s. per week for each case.

- (b) The whole cost of sickness pay in respect of male members aged 65 years and over, and of female members aged 60 years and over—subject to the same proviso as above.
2. Amount equal to contributions payable—
- (a) on account of all male members 65 years and over, and of female members 60 years and over, for medicine and medical attendance, provided that such contributions shall not be more than those payable by members of the same society under the ages stated.
- (b) under the rules of a society in respect of the aged members above mentioned, to assure payment of funeral allowance—not exceeding £50—at their death.

With the exception of the Irish National Foresters, all affiliated societies have become applicants under the Act.

The following is a summary of the claims for the last five years for which information is available :—

Year.	Applicant Societies.	Sickness Pay.				Contributions.				Total Amount of Claims.
		Continuous Sickness.		Sickness of Aged Members.		Medical.		Funeral.		
		Claimant Members.	Amount.	Claimant Members.	Amount.	Claimants.	Amount.	Claimants.	Amount.	
			£		£		£		£	£
1917	29	1,018	5,292	2,042	13,623	5,805	8,025	6,218	3,276	30,216
1918	29	1,105	5,564	2,165	14,238	6,318	8,835	6,986	3,553	32,190
1919	28	1,134	6,186	2,448	15,023	6,799	9,818	7,449	3,838	34,865
1921*	29	1,309	9,510	2,895	24,486	7,828	17,053	8,628	6,393	57,436
1921-22	27	1,170	6,483	2,696	17,837	8,172	14,415	8,909	4,694	43,429

\* Eighteen months ended 30th June.

During the thirteen years during which subvention has been payable the total claims have amounted to £353,375, details being as follows :—Continuous sickness pay, £59,821; sickness pay to aged members, £158,328; medical contributions, £95,944; and funeral fund contributions, £39,282.

The system has been of benefit to all the societies, but more particularly to those in which the proportion of aged members is large.

The following table shows the average annual weeks of sickness per member in New South Wales at every fifth year of age during the years 1900-08 in comparison with the experience of the Manchester Unity Friendly Society of England, 1893-7, the South Australian Friendly Societies, 1895-1904, and the Victorian Friendly Societies, 1903-7 :—

Central Age.	New South Wales Friendly Societies, 1900-1908.	Manchester Unity, England, 1893-1897.	South Australian Friendly Societies, 1895-1904.	Victorian Friendly Societies, 1903-1907.
Years.				
18	·84	·95	·74	·91
23	·76	·90	·77	·86
28	·74	·97	·75	·85
33	·75	1·10	·79	·89
38	·84	1·33	·89	·99
43	1·02	1·65	1·04	1·20
48	1·32	2·11	1·32	1·46
53	1·85	2·98	1·80	2·10
58	2·94	4·41	2·84	3·82
63	4·63	7·15	4·44	6·56

Since 1904 a valuation of the assets and liabilities of the societies has been made in the office of the Registrar at quinquennial intervals; particulars are given in the chapter of this volume relating to Private Finance, and the sickness experience and the mortality rate of the members of affiliated societies, exclusive of soldiers, were discussed on page 485 of the 1921 issue.

## HOUSING.

A classification of the occupied dwellings in New South Wales, as disclosed by the Census of 1921, is shown in the following statement in comparison with similar particulars, as at the previous Census; a room or a suite of rooms occupied as a tenement or flat is classified as a separate dwelling:—

Nature of Dwelling.	Number of Dwellings.				Per cent. of Total.	
	Census. 1911.	Census, 1921.			1911.	1921.
		Metro- politan.	Country.	Total.		
Private house ... ..	317,462	160,558	236,061	396,619	95·38	91·16
Tenement or flat in private house...	2,304	12,764	5,085	17,849	·69	4·10
Caretaker's quarters in store, office, etc. ... ..	237	390	241	631	·07	·15
Hotel ... ..	2,795	659	1,982	2,641	·84	·61
Boarding house, lodging house, coffee palace ... ..	5,966	8,819	3,904	12,723	1·79	2·92
Educational institution ... ..	229	156	307	463	·07	·11
Religious institution (non-educational) ... ..	135	32	57	89	·04	·02
Hospital ... ..	479	226	509	735	·14	·17
Charitable institution (other than hospital) ... ..	159	49	50	99	·05	·02
Military or Naval establishment...	112	18	15	33	·03	·01
Penal establishment ... ..	132	11	28	39	·04	·01
Police barracks ... ..	28	5	29	34	·01	·01
Police station or quarters ... ..	534	38	488	526	·16	·12
Fire station ... ..	65	62	47	109	·02	·02
Other and unspecified ... ..	68	61	537	598	·02	·14
Wagon, van, camp ... ..	2,115	22	1,846	1,868	·64	·43
Aboriginal camp in which whites or half-castes were living ... ..	21	...	18	18	·01	·00
Total dwellings ... ..	332,841	183,870	251,204	435,074	100·	100·

The most striking feature of the comparison is the increase in house-sharing, which is a result of a shortage of houses, of high rents, and building costs, and a scarcity of domestic labour. The number of tenements and flats increased from 2,304, or ·69 per cent. in 1911, to 17,849, or 4·1 per cent., in 1921, and the number of boarding and lodging houses from 5,966, or 1·8 per cent., to 12,723, or 2·9 per cent. The proportion of private houses declined from 95·38 per cent to 91·16 per cent.

In addition to the occupied dwellings there were 18,619 unoccupied dwellings, and 2,724 in course of construction in New South Wales in April, 1921.

The total number of inmates of private dwellings, *i.e.*, private houses, tenements and flats, in 1921 was 1,872,579, or 89·6 per cent. of the total population, the corresponding figures in 1911 being 1,494,504 inmates, or 91·2 per cent.

A classification of these dwellings, according to the number of inmates, gives the following comparison :—

Number of Inmates.	Number of Dwellings.		Proportion per cent.	
	1911.	1921.	1911.	1921.
1 ... ..	32,211	32,016	10·1	7·7
2 ... ..	37,648	53,838	11·8	13·0
3 ... ..	46,879	68,593	14·6	16·5
4 ... ..	50,122	72,779	15·7	17·6
5 ... ..	45,538	62,829	14·2	15·2
6 ... ..	36,714	46,978	11·5	11·3
7 ... ..	26,640	31,632	8·3	7·6
8 ... ..	18,134	20,432	5·7	4·9
9 ... ..	11,377	11,995	3·5	2·9
10 ... ..	6,593	6,645	2·1	1·6
11 to 15 ... ..	7,345	6,501	2·3	1·6
Over 15 ... ..	565	230	·2	·1
Total ... ..	319,766	414,468	100	100

In 1921 over 62 per cent. of the private dwellings contained from 2 to 5 inmates, as compared with 56 per cent. in 1911; the number of dwellings with only one inmate declined in proportion from 10·1 per cent. to 7·7 per cent. during the intercensal period, and those with more than 5 inmates from 33·6 per cent. to 30 per cent.

The average number of inmates per private dwelling in 1921, viz., 4·52, was lower than the average 4·67 in 1911, and the decrease was accompanied by a decrease in the average size of the private dwellings from 5·04 rooms to 4·97 rooms. Since 1911 many large private houses have been converted into flats or have become occupied as boarding-houses, while, on account of the high cost of building and a scarcity of domestic labour, there has been a tendency to restrict the size of new buildings.

In the following comparison the private dwellings are classified according to the number of rooms; the kitchen is included as a room, but the rooms used as bathroom, pantry, or store, are excluded :—

Number of Rooms per Dwelling.	Number of Dwellings.		Per cent. of Total.	
	1911.	1921.	1911.	1921.
1 ... ..	20,321	12,787	6·4	3·1
2 ... ..	14,596	14,072	4·6	3·4
3 ... ..	24,288	30,132	7·6	7·2
4 ... ..	70,241	102,175	22·0	24·6
5 ... ..	75,063	124,131	23·5	29·9
6 ... ..	54,369	71,158	17·0	17·2
7 ... ..	26,993	29,292	8·4	7·1
8 ... ..	14,766	13,627	4·6	3·3
9 ... ..	7,016	5,783	2·2	1·4
10-14 ... ..	9,427	6,573	2·9	1·6
15-19 ... ..	964	626	·3	·2
20 and over ... ..	382	227	·1	·1
Unspecified ... ..	1,340	3,885	·4	·9
Total ... ..	319,766	414,468	100	100



The average number of inmates per room in private dwellings was 1·08 in 1911, and 1·10 in 1921.

The principal materials used in the construction of private dwellings are wood and bricks; wooden buildings being more numerous in the country districts. In 1921 the number of private dwellings with outer walls built of brick represented 40·2 per cent. of the total, and 48·9 per cent. had wooden walls.

Materials.	Number of Private Dwellings.		Per cent.	
	1911.	1921.	1911.	1921.
Stone ... ..	9,020	9,684	2·8	2·8
Brick ... ..	114,679	166,558	35·9	40·2
Concrete ... ..	865	2,606	·3	·6
Iron ... ..	8,851	11,639	2·8	2·8
Wood ... ..	162,493	202,782	50·8	48·9
Sun-dried bricks ... ..	1,875	1,162	·6	·3
Pis5 ... ..	1,741	2,217	·6	·5
Lathe and plaster ... ..	791	923	·2	·2
Wattle and dab ... ..	744	771	·2	·2
Fibro cement ... ..	...	3,063	...	·7
Bark ... ..	1,290	906	·4	·2
Bushes, rushes, &c. ... ..	15	11	...	...
Calico, canvas, hessian, &c. ... ..	15,706	9,335	4·9	2·3
Rubberoid and other compositions ... ..	130	268	...	·1
Other materials ... ..	...	318	...	·1
Unspecified ... ..	1,566	2,225	·5	·6
Total ... ..	319,766	414,468	100	100

At the census of 1921, information was collected to show the material used for roofing the dwellings; the majority of private dwellings are roofed with iron, which is used for the bulk of the rural dwellings; in the urban areas slate is used more extensively than in the country districts; roofs of tiles are fairly numerous in the metropolitan district, but are rare in the country.

Material of Roof.	Private Dwellings, 1921.	Material of Roof.	Private Dwellings, 1921.
Slate ... ..	50,319	Bushes, rushes, &c. ... ..	14
Tiles ... ..	45,326	Calico, canvas, hessian... ..	8,317
Concrete ... ..	234	Rubberoid, and other compositions ... ..	2,213
Iron ... ..	296,047	Other materials ... ..	283
Wood ... ..	4,124	Unspecified ... ..	2,981
Thatch ... ..	93		
Fibro cement ... ..	2,720		
Bark ... ..	1,792	Total ... ..	414,468

In the metropolitan district the majority of the private dwellings are occupied by tenants, but owing to a great preponderance of owner-occupiers in the country districts approximately one half of the private dwellings in

the State are occupied by owners or by prospective owners purchasing by instalments.

Occupied by—	Private Dwellings.				Per cent. of Total.	
	1911.	1921.			1911.	1921.
		Metro- politan.	Country.	Total.		
Owner ... ..	129,423	43,451	104,032	147,483	40·5	35·6
Purchaser by instalments ...	11,322	25,394	21,550	46,953	3·5	11·3
Tenant ... ..	160,314	99,736	92,525	192,261	50·1	46·4
Other and unspecified ...	18,707	4,741	23,030	27,771	5·9	6·7
Total ... ..	319,766	173,322	241,146	414,468	100	100

The increase in the number of dwellings occupied by persons who are purchasing them by instalments is due to some extent to measures taken by the State and Federal Governments to assist people to acquire homes.

The problem of housing has assumed considerable importance in New South Wales in the past decade. In most country towns land is still comparatively cheap, and the inhabitants have generally been able to acquire adequate space for building hygienic dwellings, and, though close supervision of building was not inaugurated until 1919, such towns are free from the bad housing conditions which exist in some older countries. Nevertheless, in the city, in some of the large towns possessing an industrial population, and in mining centres, undesirable features have been allowed to obtrude, so that some parts have developed into "slum" areas.

In 1911 the Government decided to take action in the matter of housing, and a Select Committee was appointed by the Legislative Assembly to inquire into the increase in rents. In the following year the State Housing Scheme was launched, and a Royal Commissioner was appointed to investigate the question of the "Housing of Workmen." The report of the Commission drew attention to some little-recognised evils, including the "slum" areas of the city, the poor housing of towns, the absence of town-planning, and the proper supervision of town-building. A number of the points raised by the Commissioner were met by the Local Government Act, 1919, which conferred very extensive powers on municipal and shire councils, not only in supervising and regulating the construction of buildings, but in promoting schemes of town-planning on modern lines.

To assist the councils in their difficulties a Town Planning Advisory Board was appointed by proclamation of the Governor in October, 1918; and this Board is actively engaged with the problems of metropolitan and country urban settlement. A Town Planning Association was formed in 1913 with the object of promoting legislation for the better laying-out of towns and of propagating knowledge of the advantages accruing from and the need for town-planning.

Brick buildings predominate in the city and suburbs, local sandstone is used also to a great extent in the construction of the larger buildings; for

suburban dwellings the cottage plan is favoured. The maximum height of buildings in the metropolitan district is limited by law to 150 feet, except in the case of those erected for the purposes of public worship or as chimney-stacks or sewer ventilators. Outside the city proper permission must be obtained from the Chief Secretary for the erection of buildings over 100 feet high; the skyline must be approved by him and adequate provision must be made for protection against fire.

In the city of Sydney improvements in regard to housing have been continuous during recent years; in addition to the operations undertaken by private enterprise the City Council has been active in resuming and remodelling insanitary and congested areas.

The number of new buildings for which permission to erect was granted by the councils in the metropolitan district during the last five years is shown below :—

Year.	New Buildings.			Net Increase of Population, Sydney and Suburbs.
	Sydney.	Suburbs.	Total.	
1918	76	4,878	4,954	24,920
1919	147	6,969	7,116	45,470
1920	143	8,524	8,667	31,700
1921	92	5,475	5,567	25,780
1922	139	8,445	8,584	29,300

The extent of building operations in municipalities outside the metropolitan district is indicated by the following statement of the number and value of buildings for which permission to erect was granted during the last three years; only those municipalities are specified where permission was granted for the erection of more than seventy-five buildings in a year, and the other municipalities are grouped :—

Country Municipalities.	Population at Census April, 1921 (ex. Ship-ing, &c.).	1920.		1921.		1922.	
		No.	Value.	No.	Value.	No.	Value.
			£		£		£
Auburn ... ..	13,563	164	104,225	147	86,387	161	122,050
Bankstown ... ..	10,670	295	178,125	247	145,676	317	153,752
Dundas ... ..	3,523	95	99,250	46	44,000	70	70,600
Granville ... ..	13,328	152	132,721	112	69,688	170	99,814
Lidcombe ... ..	10,522	156	92,856	94	58,032	135	76,383
Parramatta ... ..	14,594	64	61,073	38	32,517	89	64,751
Fairfield ... ..	5,303	64	29,637	67	29,015	148	49,169
Prospect and Sherwood ...	8,737	130	80,733	139	62,625	219	124,040
Lismore ... ..	8,700	60	47,006	83	63,005	141	102,362
Newcastle and suburbs ...	84,372	961	788,851	773	574,304	756	547,740
Taree ... ..	1,765	29	20,650	18	23,532	85	51,464
Katoomba ... ..	9,055	66	47,832	58	45,461	86	66,911
Lithgow ... ..	13,275	91	57,896	87	49,948	39	16,455
Goulburn ... ..	12,715	137	106,394	38	25,932	55	42,027
Albury ... ..	7,751	52	46,681	24	17,884	100	47,889
Wagga ... ..	7,679	99	92,862	54	43,147	187	110,615
Other Municipalities (117)	299,455	1,244	835,448	1,106	607,956	1,871	932,377
Total ... ..	525,007	3,859	2,822,240	3,131	1,979,109	4,629	2,678,399

## ASSISTANCE TO HOME BUILDERS.

*State Operations.*

In 1912, when the shortage of the smaller class of dwelling-houses was becoming acute in Sydney, the Government took steps to supplement the operations of private builders by undertaking the construction in the South Randwick district of a model suburb, which was named Daceyville.\* The Housing Act was passed, under which the control of the operations was entrusted to a Housing Board consisting of three members, appointed by the Government. The Minister administering the Act was authorised, on the recommendation of the Board, to purchase and subdivide lands and to erect buildings for residential and other purposes and to sell or lease such buildings under certain conditions. In 1913 further provision was made for the assistance of home builders, and the Commissioners of the Government Savings Bank were authorised to make advances for the purpose.

As the shortage of houses became more acute towards the end of the war period, it was decided in 1919 to enlarge the scope of the State Housing scheme. Additional powers were given to the Housing Board, which was authorised to make advances, upon the application of persons desiring assistance for the purpose of erecting or adding to houses on land owned by them, or to erect dwellings for them on such land. The Board was empowered also to make advances to enable applicants to purchase dwellings already erected. Such advances may be made only to adult persons who do not own any other land or dwelling-house, exceeding £250 in value, and whose income does not exceed £400 per annum, and on the undertaking of the applicant that the house when erected will be used as a home for himself and his family.

The maximum amount of any advance is fixed by the statute at £1,000, and the Housing Board may not advance more than 95 per cent. of the value of any property. The loans are repayable by instalments spread over a period of thirty years for brick, and twenty years for wooden buildings, with interest at current rate. A purchaser is not permitted to sell, mortgage, or let any property purchased under the scheme before the expiration of seven years, unless with the approval of the Board.

Benefit building societies, whose objects include the provision of houses for their members, may be assisted by grants or loans, but no advances have been made as the societies were not willing to accept the terms offered by the Government. The Act authorised also the granting of assistance to the councils of municipalities and shires in regard to the erection of houses.

Under the original housing scheme it was the intention of the Government to erect cottages in model suburbs, *e.g.*, Daceyville, to be leased to the occupiers; under later arrangements, introduced in 1919, the houses in the group settlements are built for sale only.

A number of sites, the majority being areas of Crown land, have been set apart in the metropolitan district and in various country localities, as shown below. Usually the houses were erected by the Board and sold on extended payment terms, but in some cases the land was subdivided and allotted by ballot, and the persons who acquired it were given the option of erecting their own dwellings, the money being advanced by the Board, or of arranging with the Board to build the houses at a cost to be repaid in instalments.

\* See 1921 issue of Year Book at page 498.

The following statement shows particulars of the operations of the Housing Board from its inception to 30th June, 1922 :—

Site.	Area of Site.	No. of Dwellings erected.	Expenditure on Dwellings and Improvements on Land.	Site.	Area of Site.	No. of Dwellings erected.	Expenditure on Dwellings and Improvements on Land.
Metropolitan—	acres.		£		acres.		£
Daceyville ...	210	314	190,191	Hamilton ...	5	29	24,816
„ No. 1 ...	16	64	50,379	Wollongong ...	1½	10	12,216
„ No. 2 ...	48	64	92,967	Orange ...	1	8	8,087
Bunnerong ...	12	56	59,617	Forbes ...	2½	11	14,244
Matraville ...	14	20	27,239				
The Warren ...	12	61	73,397		419½	818	706,492
Gladesville ...	23	106	102,355	Private allotments (advances)	...	513	313,625
Country—				Total ...	...	1,331	1,020,117
Auburn ...	2½	14	12,193				
Stockton ...	72	61	38,791				

Owing to the fact that the funds placed at the disposal of the Board have been limited, the available moneys have been devoted towards the object of relieving the shortage of houses, and no advances have been made for the purchase of homes already built.

During the year ended 30th June, 1922, the number of houses completed was 42, and the expenditure on houses and sites amounted to £87,892.

In addition to the administration of the Housing Act the Housing Board manages an area in the city, known as the Observatory Hill Resumed Area, which was resumed by the Government in 1900 with a view to reconstruction. It consists of about 30 acres in the oldest settled portion of Sydney, adjoining the wharfs, and contains a number of business premises and residences, including tenements built for waterside workers. Extensive improvements have been made in regard to buildings, streets, etc.: the capital invested amounted, as at 30th June, 1922, to £1,360,775; the revenue during the year 1921-22 was £81,507, and the expenditure, exclusive of interest on loan capital, was £27,484.

The Municipal Council of the city of Sydney also controls a housing area on which a block of buildings, named the "Strickland Dwellings," was opened in April, 1914; it contains four shops and 71 self-contained flats of two, four, or six rooms; the rents range from 15s. 6d. to 35s. per week. The total cost, including the land, was £49,814.

#### *State Savings Bank—Advances for Homes.*

The Commissioners of the Government Savings Bank may make advances to enable persons to erect or enlarge their homes or to purchase dwellings already constructed. The Bank may advance three-fourths of the value of the property to a maximum of £750, and the repayments in the case of new stone, concrete, or brick buildings are to be made within thirty years, and in the case of wooden structures within twenty years. No advance is made to any person who at the time of the application is the owner of another dwelling in the State.

The system came into operation on 1st July, 1914, and up to 30th June, 1922, the amount of £5,255,580 had been advanced to 11,516 borrowers, and

the amount outstanding at the end of the year was £4,223,505, owing by 9,450 persons. The transactions during each year were as follow:—

Year ended 30th June.	Advances made.	
	No.	Amount.
		£
1915	575	221,900
1916	794	298,375
1917	783	274,785
1918	875	311,710
1919	1,373	530,680
1920	2,250	1,009,500
1921	2,489	1,282,360
1922	2,377	1,326,270

The average amount per advance was £558 in 1921-22. The scheme proved popular from its inception and the amount applied for in each year has greatly exceeded the available funds.

The rate of interest charged for advances was raised from 5½ to 6 per cent. on 1st July, 1917, to 6½ per cent. from 1st July, 1920, and to 7 per cent. from 1st July, 1921; it was reduced to 6½ per cent. on 1st July, 1923.

#### *Commonwealth Housing Operations.*

The Commonwealth Government assists Australian sailors and soldiers and their female dependants to acquire homes, the operations being conducted under the Commonwealth War Service Homes Act, 1918-20.

The Commissioner charged with the administration of the Act is authorised to acquire land and dwellings, and to erect dwellings, etc.; he may make advances on mortgage to eligible persons to enable them to acquire homes, or may sell homes to them on the rent-purchase system. The amount of advance on the total cost of land and a dwelling may not exceed £800, and the maximum rate of interest for repayments is 5 per cent. Up to the end of June, 1922, houses to the number of 2,339 had been erected in New South Wales, and 36 were in the course of construction; approval had been given for the erection of 647 houses, but the work had not been commenced, and purchases had been arranged or mortgages discharged in respect of 4,786 houses already built.

#### PARKS, RECREATION RESERVES, AND COMMONS.

Under the Public Parks Act the Governor may appoint trustees of any lands proclaimed for the purposes of public recreation, convenience, health, or enjoyment. The trustees are empowered to frame by-laws for the protection of shrubs, trees, etc., upon the land vested in them, and to regulate the use and enjoyment of such land by the public.

The public parks and recreation reserves which are not committed to special trustees are placed by the Local Government Act, 1919, under the control of municipal and shire councils, whose authority extends over parks, children's playgrounds, drill grounds, sports grounds, and public gardens within their boundaries. The councils are empowered to preserve places of historical and scientific interest and natural scenery, and to provide buildings for public entertainments and refreshment-rooms, boats and boat-sheds, pavilions, etc., public baths, gymnasia, and musical entertainments. All the towns of importance possess extensive parks and recreation reserves.

The city of Sydney contains within its boundaries 647 acres of parks, squares, and public gardens. The most important are—Moore Park, where about 354 acres are available for public recreation, including the Sydney Cricket Ground and the Royal Agricultural Society's Ground; the Botanic Gardens and Garden Palace Grounds, 65 acres, with the adjoining Domain, 86 acres, ideally situated on the shores of the Harbour; and Hyde Park, 37 acres, in the centre of the city. In addition, the Centennial Park, 552 acres in extent, is situated on the outskirts of the city; it was reserved formerly for the water supply, but now it is used for recreation, the ground having been cleared, planted, and laid out with walks and drives.

The suburban municipalities contain, including the Centennial Park, about 3,700 acres of public parks and reserves, or about 4 per cent. of their aggregate area.

The Zoological Gardens at Taronga Park, on the northern side of the Harbour, were opened in 1916; the area is nearly 51 acres. In their preparation the natural formation has been retained as far as practicable, with the object of displaying the animals in natural surroundings.

Outside of the metropolitan area the National Park, situated about 16 miles south of Sydney, was dedicated in December, 1879; the total area with the additions made in 1880 and 1883 is 33,800 acres. The park surrounds the picturesque bay of Port Hacking, and extends in a southerly direction towards the mountainous district of Illawarra; it contains fine virgin forests with attractive scenery.

Another large tract of land, the Kuring-gai Chase, was dedicated in December, 1894, for public use. The area of the Chase is 35,300 acres, and contains portions of the parishes of Broken Bay, Cowan, Gordon, and South Coolah. This park lies about 15 miles north of Sydney, and is accessible by railway at various points, or by water *via* the Hawkesbury River, and several creeks, notably Cowan Creek, intersect it.

In 1905 an area of 248 acres was proclaimed as a recreation ground at Kurnell, on the southern headland of Botany Bay, a spot famous as the landing-place of Captain Cook; and the Parramatta Park (252 acres), although outside the metropolis, may be mentioned on account of its historic interest.

Surrounding many country towns there exist considerable areas of land reserved as commons, on which such stock as is possessed by the townsfolk may be depastured. The use of these lands is regulated by local authorities; nominal fees are usually charged to defray the cost of supervision and maintenance. Many of these commons have been made permanent, but a large number are only temporary.

Particulars as to the areas reserved for parks and recreation reserves and for temporary commons at 30th June, 1910, and in the last three years are shown below.

As at 30th June.	Temporary Commons.	Parks and Recreation Reserves.
	acres.	acres.
1910	579,033	207,908
1920	461,529	230,857
1921	467,554	228,169
1922	455,221	229,416

The area of permanent Commons as at 30th June, 1922, was 37,445 acres, including 4,259 acres in the Western Division. Figures for the earlier years shown in the table are not available.

## PUBLIC ENTERTAINMENTS.

*Theatres and Public Halls, etc.*

All buildings in New South Wales, in which public meetings (excluding meetings for religious worship) or public entertainments are held, must be licensed under the Theatres and Public Halls Act, 1908. A license may be refused if proper provision is not made for public safety, health, and convenience, and if the site or building is unsuitable for the purpose of public meeting or entertainment, and plans of buildings intended to be used for theatres and public halls must be approved before erection is begun. Licenses are granted for a period of one year, and premises are subjected to inspection before renewal. A license or renewal of a license may be withheld until such alterations or improvements as may be deemed necessary are effected.

As at 31st December, 1922, there were 2,028 buildings to which the provisions of the Act applied, and they contained seating accommodation for approximately 937,000 persons. The total amount of fees received for licenses was £3,340.

Kinematograph films are subject to censorship prior to exhibition in New South Wales, those imported from overseas countries being reviewed by the Commonwealth customs authorities, and those made in Australia by a State board.

*Horse-racing.*

Horse-racing, which includes pony-racing and trotting races, is a popular form of sport in New South Wales, and with it is associated a large amount of betting.

The conduct of race meetings is regulated mainly by district associations, with which most of the racing clubs are affiliated; and a certain amount of Government control is exercised through the Gaming and Betting Act, 1912. Racecourses must be licensed annually, the minimum circumference of running grounds being fixed at 6 furlongs; the days on which races may be held are limited, and the number of licensed race-courses in the Metropolitan and Newcastle districts may not exceed the number existing in 1906. Betting or wagering is prohibited on any ground except a licensed racecourse or coursing ground on which races or coursing matches are being held, and all registered racing clubs and associations are required to instal a totalisator.

During the year 1922 the number of licensed racecourses was 492, and licenses were issued for 623 race meetings; racing was held on 163 days in the metropolitan district, and on 59 days in the district of Newcastle. To facilitate the collection of betting taxes bookmakers are required to use stamped tickets and to keep a record of credit bets. During the year ended 30th June, 1922, the number of betting tickets issued was 14,628,066, and 941,027 credit bets were recorded. The investments on totalisators during the same period amounted to £3,165,546. These figures are somewhat lower than in the previous year, when 15,171,580 betting tickets were issued, 446,559 credit bets were recorded, and the totalisator investments amounted to £3,303,820. The amount of betting taxes is shown on page 56 in the chapter relating to Public Finance.

*Expenditure on Public Entertainments.*

A tax on public entertainments has been imposed by the Commonwealth Government since 1st January, 1917, and the records of the Taxation Department disclose interesting information regarding the expenditure of the community in respect of such amusements.



From 1st December, 1919, to 1st October, 1922, the tax was charged on the payments for admission at the rate of  $\frac{1}{2}$ d. for each 6d. or fraction thereof: but it was not charged on payments not exceeding 5d. for the admission of children under 16 years of age to places of continuous entertainment, i.e., those open for more than four hours on three or more days in the week, nor for admission to entertainments intended only for children if the charge was under 6d. Since 2nd October, 1922, the tax has not been chargeable on payments lower than 1s. Where payment for admission is made in the form of a lump sum as a subscription to a club or association, or for a season ticket, the tax is collected on the amount of the lump sum. Certain entertainments are exempt from the tax, *e.g.*, if the proceeds are devoted wholly to philanthropic, religious, charitable, or educational purposes.

The payments for admission to taxable entertainments during the year ended 30th June, 1921, amounted to £3,228,758, and with the tax, £270,788, represented an average expenditure of £1 13s. 6d. per head of population. An amount of £2,123,707, with tax amounting to £190,651, was contributed by persons who paid less than 4s. for admission, £475,689 and tax £39,141 by those who paid 4s. and less than 10s., and the corresponding amounts paid where the charge was 10s. and over were £629,362 and £40,996.

#### REGULATION OF THE LIQUOR TRADE.

The sale of intoxicating liquor was one of the first subjects of legislation after the establishment of civil government in New South Wales. The first Liquor Act passed in 1825 introduced a system of licenses with the object of ensuring that the hotels would be kept by persons of good character, also for the purpose of taxation. Since that date the liquor laws of the State have been amended frequently, the trend of the legislation being towards greater restriction and closer regulation of the trade.

The existing law is contained in the Liquor Act of 1912 and subsequent amendments. The sale of intoxicating liquor except by persons holding a license is prohibited, and several kinds of licenses are granted, viz., publican's, packet, colonial wine, club, booth or stand, and railway refreshment room, all of which authorise the sale of liquor in small quantities; and spirit merchant's and brewer's for the sale in quantities of not less than two gallons of the same kind of liquor.

The licenses in respect of railway refreshment rooms are issued under Executive authority, and the other licenses by licensing Courts constituted for the purpose. The Licensing Court, consisting of three members, is appointed in each district, the Metropolitan Court being constituted by three stipendiary magistrates under the presidency of the chairman of the bench of stipendiary magistrates; in the country districts the stipendiary or police magistrate usually presides, but a licensing magistrate may be appointed specially if a police magistrate does not reside within a certain distance.

Objections to the granting, renewal, transfer, or removal of licenses may be made to a licensing court by three or more residents of the district or by the police. Licenses may not be held by unmarried women; they may be granted to widows and, under certain conditions, to married women, but a colonial wine license may not be issued to a woman other than the widow of a licensee. The hours of liquor trading, which since 1881 had been from 6 a.m. to 11 p.m., were reduced in 1916 when the closing hour was fixed at 6 p.m.

In recent years restrictions have been placed upon the number of licenses. In 1905 it was enacted that the number of publicans' and colonial wine licenses should not exceed the number existing in each electorate as at 1st January, 1906, and the number of licensed clubs was limited to the number formed before 1st November, 1905, of which the licenses were in force on 1st March, 1906. For many years prior to the passing of the Amending Act questions relating to the granting of new publicans' licenses and to the removal of existing licenses had been submitted at the municipal elections to the vote of ratepayers in the municipalities; but the Act of 1905 provided that the local option vote should be taken in electorates at the general elections of members of the Legislative Assembly, all qualified voters being entitled to vote for the continuance or the reduction of the number of existing license or for the termination of all licenses in the district. The Local Option vote was first taken in electorates in September, 1907, when there were in existence 3,023 hotels and 633 colonial wine licenses. As the result of the Local Option vote in 1907, and in 1910 and 1913 orders were issued for the closing of 344 hotels and for the termination of 58 colonial wine licenses.

In 1916 the Local Option vote was suspended, and in 1919 another method of regulating the number of licenses was introduced. Under the Liquor Amendment Act of that year and a subsequent amendment in 1922 it is provided that no new publicans' or colonial wine license may be granted except on the grounds of a permanent increase of population and insufficiency of existing licensed premises to meet public requirements in the district, and then only on a petition signed by a majority of adult residents living within the radius of a mile from the premises for which a license is sought.

A Licences Reduction Board was appointed under the Act of 1919 for a period of three years to reduce the number of publican licenses in any electorate where the existing licenses exceed the "statutory number," which is proportionate to the number of electors, viz.: In the nine electorates for which five members are returned to the Legislative Assembly, one license for each 250 of the first thousand electors on the electoral roll, and a further three for each subsequent two thousand, and in the fifteen electorates for which three members are returned, one license for each 250 of the first thousand electors, and a further one for each subsequent five hundred.

The Board may not reduce the licenses in an electorate below the statutory number nor by more than one-fourth of the number in force on 1st January, 1920; the term of the Board's operations was extended in December, 1922, for a further period of three years, and it was charged with the additional duty of reducing the colonial wine licenses in each electorate by not more than one-fourth of the number in force on 1st January, 1923. In determining the licenses which shall cease the Board takes into consideration the convenience of the public, the requirements of the several localities in the electorate, the class of accommodation provided, and the manner in which the business has been conducted. When deprived of their licenses, the holders and, in the case of hotels, the owners, lessees, etc., of the premises are entitled to compensation as assessed by the Board. The funds for compensation are obtained by a levy on the amount spent by all licensees in purchasing supplies of liquor; for hotel licenses the levy is at the rate of 3 per cent., of which the licensee pays one-third and the owner two-thirds; for colonial wine licenses the rate is 1 per cent., but it may be increased to 2 per cent. if a lower rate does not yield an adequate sum. In cases where the owner's share of the compensation exceeds one-third of the rent the Board is empowered to refund to him the amount of the excess.

A licensee deprived of his license by the Board is paid as compensation for each year of the unexpired term of his tenancy (up to three years), the average annual net profit during the preceding period of three years; and owners, lessees, etc., of hotel premises receive compensation based on the amount by which the net return from the premises over a period of three years is diminished by being deprived of a license.

On 1st January, 1920, the number of publicans' licenses in existence was 2,539, of which 2,085 were in fourteen electorates with more than the statutory number, and the maximum reduction which the Act authorised the Board to make was 483. During the period of three years ended December, 1922, the Board deprived 126 hotels of licenses and accepted the surrender of 36 licenses; 106 of these hotels were closed before the end of December, 1922, and 56 were ordered to close during the following year. Sixty-eight were situated in Sydney and suburbs, 23 in the electoral district of Newcastle, and 71 in other localities. The compensation awarded in respect of the 162 licenses amounted to £267,310, which was distributed as follows:—licensees, £71,590; owners, £186,805; lessees, £8,515; and sub-lessees, £400. The compensation fees collected by the Board amounted to £163,965 in 1920, and to £207,799 and £213,233 in the succeeding years; the balance to the credit of the compensation fund on 31st December, 1922, was £419,965, but a large proportion of the amount of compensation stated above had not been paid at that date. In addition to the licenses terminated or ordered to close by the action of the Licenses Reduction Board, 48 licenses were terminated during the three years 1920–22 by reason of expiration cancellation, surrender to the Licensing Courts, &c., and 4 new licenses were granted during the period.

The number of licenses for the sale of intoxicating liquor issued during various years since 1901 is shown below:—

License.	1901.	1906.	1911.	1916.	1921.	1922.
Publican's ... ..	3,151	3,055	2,775	2,617	2,488	2,470
Additional Bar ... ..	...	...	118	132	153	142
Club ... ..	...	80	76	76	78	78
Railway Refreshment ... ..	22	24	24	27	29	31
Booth or Stand ... ..	1,787	2,014	1,829	1,816	2,337	2,451
Packet ... ..	20	25	24	21	13	13
Colonial Wine, Cider, and Perry	675	647	532	487	450	432
Spirit Merchant's... ..	225	207	198	193	244	247
Brewer's ... ..	53	40	39	24	17	17

The annual fees payable for new licenses in respect of hotels, packets, and colonial wine are assessed by the Licensing Court, the maximum fees being £500, £20, and £50 respectively; clubs pay £5 per annum for the first 40 members, and £1 for each additional forty; and spirit merchants pay £30 in the metropolitan district and £20 elsewhere. For renewals of these licenses the annual fees are assessed by the Licenses Reduction Board at the rate of 2 per cent. of the amount spent by the licensees in the purchase of liquor during the preceding year, except that spirit merchants do not pay on the liquor sold by them to other licensees. Brewers pay £50 per annum in the metropolitan district and £25 in other districts; and for booth and stand licenses, which are temporary permits granted to licensed publicans for the sale of liquor at places of public amusement, fees are charged at the rate of £2 for each period up to seven days. The Liquor Act of 1922 prescribes that all licenses, except booth and stand, must be renewed on 1st

July of each year; previously they were current for the term of one year from the date on which they were granted.

### *Drunkenness.*

Persons apprehended by the police for drunkenness in public places are charged in the Courts of Petty Sessions. Since September, 1916, it has been the practice in the metropolitan police district to release such persons before trial if they deposit as bail an amount equal to the usual penalty imposed; if they do not appear for trial the deposits are forfeited, and further action is not taken. During the year 1922 the number of persons charged with drunkenness was 29,047, of which 2,013 were females; in the cases of 276 males and 69 females the charges were withdrawn or dismissed; 18,525 males and 1,172 females were convicted after trial by the Courts, and 8,233 males and 772 females, who did not appear for trial, forfeited their bail. The following statement shows the number of convictions for drunkenness, including the cases in which bail was forfeited during each of the five years, 1917-1921 :—

Year.	Convictions.		Bail Forfeited.		Total Cases.			Cases per 1,000 of mean population.
	Males.	Females.	Males.	Females.	Males.	Females.	Total.	
1917	15,421	2,038	3,130	313	18,551	2,351	20,902	10·97
1918	13,016	1,712	5,168	590	18,184	2,302	20,486	10·54
1919	11,820	1,289	5,923	514	17,743	1,803	19,546	9·77
1920	14,527	1,554	9,029	733	23,556	2,287	25,843	12·49
1921	18,525	1,172	8,233	772	26,758	1,944	28,702	13·61

From the statement it is apparent that the number of convictions for drunkenness amongst men was much lower in the earlier years under review; at that time, however, a considerable number of men undergoing military service were exempt from the jurisdiction of the civil courts in regard to such offences.

Particulars relating to the treatment of inebriates are shown on page 324 of this volume, in the chapter relating to Prison Services.

### *Consumption of Intoxicants.*

It is estimated that the consumption of intoxicating liquors in New South Wales during the year ended June, 1922, was as follows :—Spirits, 905,000 proof gallons; beer, 24,466,000 gallons; and wine, 1,335,100 gallons. The quantities were less than in the previous year by 2,600 gallons of spirits, 827,300 gallons of beer, and 166,500 gallons of wine.

It should be noted that the figures show the proof alcoholic contents of the beverages sold as spirits; the actual quantities would be at least 25 per cent. greater; whisky and brandy of the best quality are retailed usually at about 23·5 per cent. under proof, and gin and rum at about 30 per cent. under proof. The standards under the Pure Food Act are whisky and brandy 25 per cent. under proof, gin and rum 35 per cent. under proof.

The consumption of spirits, Australian and imported, in various years since 1901 is estimated to have been as follows :—

Year.	Aggregate Consumption of Spirits.			Per Head of Population.		
	Australian.	Foreign.	Total.	Australian.	Foreign.	Total.
	proof-gallons.	proof gallons.	proof gallons.	proof gallons.	proof gallons.	proof gallons.
1901	12,400	1,233,300	1,245,700	·01	·89	·90
1906	132,900	1,030,700	1,163,600	·09	·69	·78
1911	194,300	1,337,800	1,532,100	·12	·80	·92
1913	285,600	1,449,300	1,734,900	·16	·79	·95
1916-17	433,500	849,700	1,283,200	·23	·45	·68
1917-18	420,400	669,000	1,089,400	·22	·35	·57
1918-19	290,700	451,700	742,400	·15	·23	·38
1919-20	482,600	554,900	1,037,500	·24	·27	·51
1920-21	451,100	456,500	907,600	·22	·21	·43
1921-22	391,600	513,400	905,000	·19	·24	·43

The consumption of spirits, which had been increasing slowly for five or six years, decreased by 60 per cent. during the five years following the outbreak of the war. In 1918-19 the decrease amounted to one-third, as compared with the previous year. In the following year there was a decided increase, and the consumption per head rose almost to the level of 1917-18; then it declined by 16 per cent. to ·43 proof gallon per head. In 1921-22 the total consumption per head was about the same as in the preceding year, though more foreign and less Australian spirits were consumed.

The consumption of beer as estimated for 1901 and subsequent years is shown below :—

Year.	Quantity of Beer consumed.			Per Head of Population.		
	Australian.	Imported.	Total.	Australian.	Imported.	Total.
	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
1901	13,118,300	1,757,900	14,876,200	9·60	1·28	10·88
1906	12,716,800	812,400	13,529,200	8·56	·55	9·11
1911	18,332,900	1,200,100	19,533,000	11·01	·72	11·73
1913	22,973,400	1,338,000	24,311,400	12·62	·74	13·36
1916-17	21,159,200	204,000	21,363,200	11·17	·11	11·28
1917-18	21,978,500	88,600	22,067,100	11·43	·04	11·47
1918-19	23,923,000	53,100	23,976,100	12·10	·03	12·13
1919-20	26,724,100	92,000	26,816,100	13·11	·05	13·16
1920-21	25,163,500	129,800	25,293,300	12·04	·06	12·10
1921-22	24,412,000	54,000	24,466,000	11·47	·03	11·50

The consumption of beer per head increased considerably between 1901 and 1913, but after the commencement of the war it decreased. After 1918 it rose for a few years, until in 1919-20 it was almost equal to that of 1913; it has since decreased by 13 per cent. Practically all the beer consumed is brewed in Australia.

The wine entering into consumption in New South Wales is chiefly the produce of Australian vineyards.

Year.	Consumption of Wine.					
	Aggregate.			Per Inhabitant.		
	Australian.	Foreign.	Total.	Australian.	Foreign.	Total.
	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
1901	700,000	94,000	794,000	·51	·07	·58
1906	916,600	39,400	956,000	·62	·02	·64
1911	908,700	57,900	966,600	·55	·03	·58
1913	927,800	58,500	986,300	·51	·03	·54
1916-17	764,500	30,300	794,800	·40	·02	·42
1917-18	839,500	22,000	861,500	·44	·01	·45
1918-19	895,700	15,900	911,600	·45	·01	·46
1919-20	1,321,100	33,200	1,354,300	·65	·01	·66
1920-21	1,480,100	21,500	1,501,600	·71	·01	·72
1921-22	1,312,500	22,600	1,335,100	·62	·01	·63

Though the consumption of wine per head of population declined somewhat in 1921-22, the average was higher than in 1913; the quantity of Australian wine consumed was higher by 47 per cent. than it was three years ago.

The following statement shows the consumption per head of intoxicating liquors in various countries at the latest date for which the information is available :—

Country.			Spirits.	Wine.	Beer.
			gallons.	gallons.	gallons.
New South Wales	...	1921-22	·43	·63	11·50
South Australia	...	1921-22	·31	·75	10·97
Western Australia	...	1922-23	·37	·88	13·32
Tasmania	...	1920	·48	·19	9·50
Australia	...	1920-21	·36	·50	12·20
New Zealand	...	1921	·79	·18	11·24
United Kingdom	...	1916	·77	·22	20·84
Canada	...	1920-21	·86	·08	3·95
France	...	1917	·41	26·84	4·48
United States	...	1921	·32	·19	2·61

#### *The Drink Bill.*

The amount of money expended on intoxicating liquors in New South Wales in the year ended 30th June, 1922, is estimated to have been £10,671,000, or £5 0s. 2d. per head. The annual drink bill, as estimated for various years since 1901, is shown below :—

Year.	Drink Bill.		Year.	Drink Bill.	
	Total.	Per Head of Population.		Total.	Per Head of Population.
	£	£ s. d.		£	£ s. d.
1901	5,000,000	3 13 2	1917-18	7,223,000	3 15 1
1906	4,569,000	3 9 0	1918-19	7,275,000	3 14 0
1911	5,962,000	3 11 7	1919-20	10,251,000	5 0 7
1913	7,001,000	3 16 11	1920-21	11,034,000	5 5 7
1916-17	6,667,000	3 10 5	1921-22	10,671,000	5 0 2

Between 1913 (the year before the commencement of the war) and 1916-17 the prices of intoxicants increased, and the consumption decreased in each year until in 1916-17 the decreased consumption offset the increased prices and caused a reduction in the total drink bill.

During 1917-18 and 1918-19 prices continued to rise, and with a slight increase in the average consumption of beer and wine the aggregate expenditure on intoxicants increased. The imposition of a new tariff in March, 1920, caused a further rise in prices, but there was a noticeable increase in the consumption of all kinds of intoxicants, and the drink bill rose by nearly £3,000,000 in 1919-20. But it should not be assumed that the average consumption was abnormally high, as it was somewhat less than in 1913. In 1920-21 there was a further increase in the drink bill, but it was due entirely to higher prices, as there was a substantial decline in the quantity of intoxicants consumed. In the following year prices were about the same as in 1920-21, and as the consumption diminished the drink bill declined by about 5s. 5d. per head.

The drink bill of the United Kingdom in 1913 was estimated at £166,000,000, or £3 12s. per head; in 1920 it had increased to £469,700,000, or £10 per head, notwithstanding a decline of about 24 per cent. in the consumption measured in terms of absolute alcohol. Subsequently a marked decrease occurred, and the estimated expenditure in 1922 was £354,000,000, or about £7 8s. per head.

#### CONSUMPTION OF TOBACCO.

Under an Act passed in 1884 in connection with the imposition of an excise tax, of which most of the provisions have been superseded by Federal legislation, persons who sell tobacco in New South Wales are required to obtain a license for which an annual fee of 5s. is charged; the number of licenses issued in 1921 was 15,488. The sale of tobacco to juveniles under the age of 16 years is prohibited.

The quantity of tobacco consumed in New South Wales, as estimated at intervals since 1901, is shown in the following statement:—

Year.	Total Consumption (000 omitted).				Per Head of Population.			
	Tobacco.	Cigars.	Cigarettes.	Total.	Tobacco.	Cigars.	Cigarettes.	Total.
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1901	2,977	215	368	3,560	2·18	·15	·27	2·60
1906	3,603	203	559	4,365	2·43	·13	·38	2·94
1911	3,827	271	1,076	5,174	2·30	·16	·65	3·11
1913	3,853	306	1,413	5,572	2·11	·17	·78	3·06
1916-17	4,098	263	1,283	5,644	2·16	·14	·68	2·98
1917-18	4,208	244	1,318	5,770	2·19	·13	·68	3·00
1918-19	3,918	252	1,484	5,654	1·99	·13	·76	2·88
1919-20	4,638	292	1,937	6,867	2·28	·14	·95	3·37
1920-21	4,370	273	1,958	6,601	2·09	·13	·94	3·16
1921-22	5,039	252	1,855	7,146	2·37	·12	·87	3·36

The quantity of tobacco (including cigars and cigarettes) consumed in 1921-22 was 7,146,000 lb., which represents an average of 3·36 lb. per head of population. The annual consumption per head during the last three years was over 6 per cent. higher than in the three years 1911-13, and it is estimated that the expenditure on tobacco in 1921-22 amounted to £5,464,000, or £2 11s. 4d. per head of population, as compared with £2,858,000, or £1 11s. 5d. per head in 1913.

As regards the description of tobacco used, the proportion of cigarettes advanced during the period under review from 10 to 26 per cent., and the proportion of ordinary tobacco declined from 84 to 71 per cent.

Of the total tobacco consumed in 1921-22, about 98 per cent. was manufactured in Australia, viz., ordinary tobacco 99 per cent. made in Australia, cigarettes 96 per cent., and cigars 82 per cent. The proportions made in Australia in 1911 were 85 per cent., 94 per cent., and 46 per cent. respectively.

#### LICENSES FOR VARIOUS OCCUPATIONS.

Partly as a means of raising revenue and partly as a means of ensuring a certain amount of supervision over persons who follow callings which bring them into contact with the general public or which are carried on under special conditions, licenses must be obtained by auctioneers, pawnbrokers, hawkers, pedlars, collectors, second-hand dealers, and persons who conduct billiard and bagatelle tables or engage in Sunday trading.

Auctioneers' licenses are divided into two classes, viz., General and District, the annual fee for a general license being £15, and for a district £2. General licenses are available for all parts of the State; district licenses only cover the police district for which they are issued, but they are not issued for the Metropolitan district. Sales by auction are illegal after sunset or before sunrise, except in the Municipality of Albury, where, under the Auctioneers' Licensing (Amendment) Act, 1915, wool may be put up to sale or sold after sunset.

For pawnbrokers' licenses an annual fee of £10 is payable. The hours for receiving pledges are limited, with certain exceptions, to between 8 a.m. and 6 p.m., but no restriction is placed on the rate of interest charged.

The following table shows the principal licenses issued in the six years 1916-1921:—

Occupation.	1913.	1917.	1918.	1919.	1920.	1921.
Auctioneers—General ... ..	303	287	344	344	391	391
District ... ..	1,683	1,745	1,909	1,995	2,200	2,132
Billiard and Bagatelle ... ..	838	733	785	763	815	781
Tobacco ... ..	13,179	13,089	13,308	14,141	14,391	15,488
Pawnbrokers ... ..	99	102	100	102	95	102
Hawkers and Pedlars ... ..	1,178	1,149	1,224	1,479	1,440	1,951
Collectors ... ..	1,852	2,092	2,354	2,207	2,126	2,136
Second-hand Dealers ... ..	946	993	1,216	1,247	1,421	1,475
Stage Carriage ... ..	222	193	153	212	139	123
Sunday Trading ... ..	4,604	4,826	5,825	6,014	6,381	6,985
Gun Licenses (ordinary) ... ..	...	...	...	...	...	64,682
"    "    (special) ... ..	...	...	...	...	...	36,961
Gun Dealers ... ..	...	...	...	...	...	684

#### STATUS OF WOMEN.

In New South Wales women have had the right to exercise the franchise since 1902, and, in 1918, it was provided that sex should not disqualify any person from acting as member of the Legislative Assembly, as member of a council of any shire or municipality, as judge, magistrate, barrister, solicitor or conveyancer: women have contested elections, but none has been elected. A number of women have been appointed justices of the peace and one has been admitted to practice as a barrister; women may not act on juries. They are eligible for all degrees at the University of Sydney, but are not ordained as ministers of religion.

The employment of women in factories and shops is regulated specially by the Factories and Shops Act, 1912, which limits the continuous employ-



ment of women to five hours, restricts the amount of work they may do in excess of forty-eight hours per week and between 6 p.m. and 6 a.m., and limits the employment of girls under 18 years of age. The minimum wage for any employee in a factory or shop is fixed at 4s. per week. Many trade unions have women members; and a separate living wage for women employees is determined after special inquiry by the Board of Trade, but a definite principle of equality or difference between the pay of women and men is not observed in the industrial awards and agreements.

A legal age of marriage has not been defined, but the average age at which women marry is about 25 years; the consent of a parent or guardian is necessary to validate the marriage of minors. The wife of a British subject is deemed to be a British subject throughout Australia. By the Married Women's Property Act, 1901, a married woman is capable of holding, acquiring, or disposing of any real or personal property as her separate property in the same manner as if she were a *femme sole*; her property is not liable for her husband's debts, and her earnings in any occupation apart from her husband's are her own. A wife, however, has no legal share of her husband's income or in any property acquired by their joint efforts after marriage, but a husband is liable for all necessary expenses of his wife and children.

### RELIGIONS.

In New South Wales there is no established church; and freedom of worship is accorded to all religious denominations.

The number of adherents of the principal religions, as disclosed by the census records, is shown in the following statement:—

Religion.	Number of Persons.			Proportion per cent.		
	1901.	1911.	1921.	1901.	1911.	1921.
<b>Christian—</b>						
Church of England ... ..	623,131	734,000	1,027,301	46.58	45.46	49.60
Roman Catholic ... ..	347,286	412,013	502,815	25.96	25.54	24.27
Methodist ... ..	137,638	151,274	181,977	10.29	9.37	8.79
Presbyterian ... ..	132,617	182,911	219,932	9.91	11.33	10.62
Congregational ... ..	24,834	22,655	22,235	1.86	1.40	1.07
Baptist ... ..	15,441	20,679	24,722	1.15	1.28	1.19
Lutheran ... ..	7,387	7,087	5,031	.55	.44	.24
Unitarian ... ..	770	844	622	.06	.05	.03
Salvation Army ... ..	9,585	7,413	9,490	.72	.46	.46
Other Christians ... ..	14,812	55,453	49,072	1.10	3.44	2.37
<b>Total Christians</b> ... ..	<b>1,313,501</b>	<b>1,594,329</b>	<b>2,043,197</b>	<b>98.18</b>	<b>98.77</b>	<b>98.64</b>
<b>Others—</b>						
Jew, Hebrew ... ..	6,447	7,660	10,150	.48	.47	.49
Buddhist, Confucian, Moham- medan, etc. ... ..	8,035	5,113	4,472	.60	.32	.22
Indefinite—No Religion ... ..	9,829	7,163	13,572	.74	.44	.65
Object to state ... ..	13,068	21,986	12,946	...	...	...
Unspecified ... ..	3,966	10,483	16,034	...	...	...
<b>Total, New South Wales</b>	<b>1,354,846</b>	<b>1,646,734</b>	<b>2,100,371</b>	<b>100</b>	<b>100</b>	<b>100</b>

In the table the persons returned as Catholic (undefined) have been included with "Roman Catholic," the number in 1921 being 20,240, and in 1911, 36,622.

## POSTS AND TELEGRAPHS.

The postal, telegraph, and telephone services of New South Wales have been administered by the Commonwealth Government since 1st March, 1901. Previously the services in each State of the Commonwealth were organised separately under the various State Governments, and a variety of rates, charges, and other conditions were in operation. Since the amalgamation a large measure of uniformity has been introduced. The services are administered by a Minister of the Crown, with a permanent salaried officer in charge of the central executive office and a deputy in each State.

*Postal Services.*

Post offices have been established throughout the State, even in localities where there are few residents; if the volume of business does not warrant the establishment of a full service, receiving offices are opened for the collection of mail matter for conveyance to and from the nearest post office. The transport of mails in outlying districts has been expedited considerably in recent years by reason of an extended use of motor traction, and aerial services are being established. The number of inland mail services in operation in New South Wales in 1921-22 was 2,303; the cost of road services amounted to £264,738, and of railway services to £155,879.

Ocean mail services are conducted in accordance with arrangements made between the Commonwealth Government and the steamship owners; some of the services between Australia and the Pacific Islands are subsidised by the Commonwealth, and the Orient Steamship Company receives £130,000 per annum for a four-weekly service with Europe. Mails are conveyed along other routes at poundage rates; they are despatched at least once a fortnight to Europe, *via* Suez, and there is regular communication with America and with Eastern ports.

The number of post offices and the volume of postal business in New South Wales in various years since 1901 is shown below; inland postal articles are counted once only:—

Year.	Post Offices.	Receiving Offices.	Postal Articles carried (000 omitted).				Postal Articles.
			Letters, Post-cards, and Registered Articles.	Newspapers.	Packets.	Parcels.	Per Head of Population.
1901	1,684	524	82,783	52,318	14,480	736	109.9
1911	1,948	542	189,656	71,619	36,283	1,749	179.7
1915-16	2,074	566	219,526	72,067	33,343	2,538	172.9
1916-17	2,040	548	259,186	68,547	28,231	2,906	189.4
1917-18	2,031	548	255,177	62,321	24,814	2,923	179.5
1918-19	2,037	562	240,591	63,368	22,887	2,977	167.7
1919-20	2,034	559	256,062	61,408	20,038	2,951	167.0
1920-21	2,031	578	262,026	63,261	20,932	3,607	167.4
1921-22	2,032	556	240,088	66,381	21,043	3,908	155.7

During the year 1921-22 the average number of postal articles per head of population was as follows:—Letters, etc., 113; newspapers, 31; and packets and parcels, 12. The mail matter carried in 1921-22 included the following articles despatched to or received from countries outside Australia, *viz.*, letters, postcards, and registered articles, 24,215,000; newspapers, 6,101,000; packets, 1,444,000; and parcels, 228,000. The total number of registered articles was 2,243,000, of which 317,000 were to or from other countries.

As compared with the preceding two years there was a decrease in the number of letters, etc., for which reasons may be found in an increase in rates for postage, brought into operation in October, 1920, and in a decline in business activity, which had been unusually brisk during the period immediately following the cessation of war.

Mainly for the convenience of people who reside at a distance from the trading centres a system of value-payable parcel post has been established. The Department accepts for transmission within the Commonwealth parcels or letters sent in execution of orders, and collects from the addressees on behalf of the senders the charges due thereon. The system applies also to registered articles transmitted to or from Papua. During the year ended 30th June, 1922, the number of such parcels posted in New South Wales was 93,621, and the value collected was £172,258, the revenue, including postage, commission on value, registration, and money-order commission being £12,144.

#### *Telegraphs and Cables.*

The telegraph system embraces the whole Commonwealth; it has been extended steadily since January, 1858, when the system was opened to the public in New South Wales, and modern equipment has been installed in the chief centres to expedite the transmission of messages. Cable communication with Europe and other countries is supplied by four main routes, one cable lands in Durban (South Africa), one in Bamfield (Canada), and two in Banjoewangie (Java); lines have been laid also between the Australian mainland and Tasmania, New Zealand, and New Caledonia. The Pacific cable between Australia and Canada is maintained by the Governments of the United Kingdom, Canada, New Zealand, and Australia.

For cable messages to Great Britain the ordinary rate is 3s. per word, but messages may be transmitted *via* Pacific cable to Canada, and thence by wireless for 2s. 10d. per word. Deferred cablegrams written in plain language and subject to a delay not exceeding twenty-four hours may be exchanged at half the ordinary rates with Great Britain and with a number of other British and foreign countries; and week-end cable letters may be transmitted between Australia and the United Kingdom, British North America, and Fanning Island, the rate to and from Great Britain being 15s. for twenty words and 9d. for each additional word. Special conditions with cheap rates have been arranged for the transmission of press messages by telegraph or cable.

The following table gives particulars relating to the telegraph business transacted in New South Wales since 1901:—

Year.	Telegraph Stations.	Telegrams (including Cablegrams).			Revenue Received.
		Transmitted and delivered (Inland counted once).	In Transit.	Total.	
1901	978	3,275,197	174,118	3,449,315	£ 186,135
1911	1,406	5,505,935	413,777	5,919,712	253,398
1915-16	2,107	6,402,092	624,992	7,027,084	331,924
1916-17	2,231	6,491,354	661,559	7,152,913	350,581
1917-18	2,237	6,870,263	728,154	7,598,417	386,919
1918-19	2,252	7,183,234	753,219	7,936,453	416,427
1919-20	2,247	8,283,993	760,105	9,044,098	455,014
1920-21	2,252	7,851,429	734,406	8,585,835	489,805
1921-22	2,324	7,381,205	734,377	8,115,582	500,116

Excluding the messages in transit, the telegrams in 1921-22 represented 3·8 per head of population; the number of inland telegrams was 4,187,795, the interstate messages received and despatched numbered 2,671,407, and the cablegrams 522,003. Messages to and from Tasmania are classified as interstate telegrams and not as cablegrams.

Further particulars regarding the cable business transacted in New South Wales during the last five years are shown below; messages in transit are not included :—

Year.	Cable Messages.		Amount Collected.	
	Sent from New South Wales.	Received in New South Wales.	Total	Portion due to Commonwealth Government.
			£	£
1917-18	192,467	251,919	628,291	51,382
1918-19	196,521	274,180	899,833	67,058
1919-20	250,260	277,879	875,280	76,117
1920-21	249,705	263,482	697,892	62,461
1921-22	252,815	269,188	697,063	62,248

#### WIRELESS TELEGRAPHY.

A chain of stations has been erected around the coast of Australia and in the Pacific Islands under the control of the Commonwealth to give wireless communication with shipping; three of the stations, including the Sydney station, are capable of long distance communication. In May, 1922, the commercial radio stations were transferred to the Amalgamated Wireless (Australasia), Limited, under an agreement with the Federal Government; the Commonwealth has a controlling interest in the concern, and the company has undertaken to establish and maintain a direct commercial wireless service between Australia and the United Kingdom, and to erect a station in Canada capable of communicating with Australia.

Private installations for wireless communication and for broadcasting may be operated under license, but they are not permitted to compete in commercial traffic unless authorised to do so.

For wireless telegrams between telegraph offices in New South Wales and an Australian ship the charge is 6d. per word, and other ships 11d. per word; messages are transmitted between Australian radio stations at the rate of 2s. 8d. for sixteen words and 2d. per additional word.

#### TELEPHONES.

The telephone system was established in Sydney in 1880; exchanges have since been provided in many other centres, and the system is being installed in country districts wherever practicable. In the Metropolitan district a number of automatic exchanges are in operation. Trunk lines serve a wide area of the State, and a line between Sydney and Melbourne was brought into use in 1907.

The following table shows the growth of the telephone service in New South Wales since 1901 :—

Year.	Exchanges.	Number of Lines Connected.	Public Telephones.	Telephone Instruments connected.
1901	48	9,864	72	13,778
1911	268	34,551	722	43,032
1915-16	705	51,905	1,317	66,532
1916-17	765	57,553	1,421	70,058
1917-18	825	62,123	1,521	78,886
1918-19	853	65,734	1,558	84,118
1919-20	873	70,700	1,606	91,117
1920-21	921	74,490	1,693	96,710
1921-22	960	80,042	1,787	104,108

The annual ground rent for an exclusive telephone service ranges from £3 in respect of exchanges, where the number of subscribers lines does not exceed 300, to £5 where there are over 4,000 lines; and for each effective outward call a charge of 1½d. is made unless the number of lines connected with the exchange does not exceed 600, when the charge is 1d. per call

Tests are being made of the capabilities of wireless telephony, but no commercial service has yet been instituted.

#### FINANCIAL RESULTS OF POSTAL SERVICES.

Particulars regarding the financial results of operations in the various branches of the post office in New South Wales during the year ended 30th June, 1922, are shown below :—

Branch.	Earnings.	Working Expenses.	Surplus.	Interest on Capital.	Net Profit.
	£	£	£	£	£
Postal ... ..	2,002,565	1,522,717	479,848	40,335	439,513
Telegraph ... ..	533,252	468,232	65,020	38,256	26,764
Telephone ... ..	1,086,908	856,255	230,653	188,456	42,197
Total, All Branches...	3,622,725	2,847,204	775,521	267,047	508,474

The postal services in the Commonwealth, as a whole, as well as in New South Wales, have earned a substantial surplus over expenses during each of the last five years, and the net profit has increased threefold as a result of higher charges introduced in 1920.

A comparative statement of the financial results for the whole Commonwealth is shown in the following statement :—

Year. ended 30th June.	Earnings.	Working Expenses.	Surplus.	Interest on Capital.	Net Profit.
	£	£	£	£	£
1918	5,773,954	4,809,571	964,383	577,001	387,382
1919	6,158,571	5,043,891	1,114,680	590,035	524,645
1920	6,732,096	5,633,752	1,098,344	610,390	487,954
1921	8,511,494	6,724,543	1,786,951	643,183	1,143,768
1922	9,347,656	7,103,536	2,244,120	703,039	1,541,081

The accounts are exclusive of the figures relating to wireless telegraphy.

## MINING INDUSTRY.

NEW SOUTH WALES contains extensive mineral deposits of great value and variety. Coal was discovered as early as 1797, though under the industrial conditions prevailing at that time its importance was not fully realised. World-wide interest, however, was excited by the announcement in 1851 that gold had been discovered in New South Wales; it attracted a rapid flow of immigration to the country and promoted the development of its resources. In later years copper, tin, and silver-lead deposits were opened up and coal and silver-lead have proved to be the richest sources of mineral production.

With the exhaustion of the known alluvial deposits, where valuable minerals were recoverable without the expenditure of much capital, the organisation of the mining industry has become to a great extent the province of companies and syndicates with the necessary financial resources to instal machinery and to conduct operations on a large scale.

### *Supervision of Mining, etc.*

The general supervision of the mining industry in the State and the administration of the enactments relating to mining are functions of the Department of Mines under the control of a responsible Minister of the Crown. In the mining districts Warden's Courts, each under the sole jurisdiction of a Warden, determine suits relating to the right of occupation of land for mining and other matters in regard to mining operations.

### LAND OCCUPIED FOR MINING.

The occupation of land for the purpose of mining is subject to the Mining Act of 1906 and its amendments. Any person may obtain a miner's right which entitles the holder, under prescribed conditions, to occupy Crown land for mining purposes and to mine therein, and to occupy as a residence area land not exceeding a quarter of an acre within the boundaries of a town or village, or 2 acres elsewhere. A holder of a miner's right may apply also for an authority to prospect on Crown lands, and, in the event of the discovery of any mineral, he may be required to apply for a lease of the land or to continue prospecting operations. Another form of occupation of Crown land in connection with mining is under the rights conferred by a business license which entitles the holder to occupy a limited area within a gold or mineral field for the purpose of carrying on any business except mining.

A business license confers the right to only one holding at a time; holders of miner's rights may take possession of more than one tenement, but are required to hold an additional miner's right in respect of each tenement after the first of the same class. The term of a miner's right or business license is not less than six months and not more than twenty years. It may be renewed upon application, and is transferable by endorsement and registration. The fee for a miner's right is at the rate of 5s. per annum, and for a business license £1 per annum. The number of miner's rights issued during 1922 was 10,857, and of business licenses 425; these figures show a marked decline in comparison with those for the year 1913 when 17,766 miner's rights and 1,039 business licenses were issued.

Crown lands may be granted as mining leases, which authorise mining on the land, and as leases for mining purposes which authorise the use of the land for conserving water, constructing drains, etc., and railways, erecting buildings and machinery and dwellings for miners, generating electricity, dumping residues, and for other works in connection with mining, but do not allow mining or the removal of minerals from the land. Except in the case of special leases, which may be granted in certain cases, the maximum area of a mining lease varies according to the mineral sought, viz., opal,  $\frac{1}{2}$  acre; gold, 25 acres; coal, shale, mineral oils, petroleum, or natural gas, 640 acres; other minerals, 80 acres.

Private lands are open to mining subject to the payment of rent and compensation and to other conditions as prescribed. The mining wardens may grant to the holders of miners' rights authority to enter private lands, but, except with the consent of the owner, the authority does not extend to land on which certain improvements have been effected, *e.g.*, cultivation, or the erection of substantial buildings. An authority may be granted for a period up to two years, and during its currency the holder may apply for a mining lease of the land; leases of private lands for mining purposes may be granted also. The maximum areas of private lands that may be leased are:—Opal, 150 ft. square; coal and shale, 640 acres, and other minerals, 80 acres. The owners of private lands, with the concurrence of the Minister for Mines, may lease areas under agreement to holders of miners' rights.

Dredging leases may be granted in respect of Crown and private lands, including the beds of rivers, lakes, etc., and land under tidal waters.

The area under mining occupation in New South Wales at 31st December, 1922, was approximately 500,241 acres made up as follows:—

Nature of Holding.							Crown Lands.	Private Lands.	Total.
							acres.	acres.	acres.
Leases—									
Mining ... ..							235,924	39,222	275,146
Mining Purposes ... ..							5,934	616	6,550
Dredging ... ..							1,985*	...	1,985
Agreements ... ..							...	47,275	47,275
Authority to Enter ... ..							...	40,378	40,378
Authority to Prospect ... ..							866	...	866
Miner's Rights and Business Licenses ... ..							7,927	...	7,927
Applications for Leases—									
Mining ... ..							64,769	33,001	97,770
Mining Purposes ... ..							825	413	1,238
Applications for Authority to Prospect ... ..							19,938	...	19,938
Other Mining Titles ... ..							1,168*	...	1,168
Total ... ..							339,336	160,905	500,241

\* Includes Private Lands.

The annual rent for mining leases of Crown lands is 2s. per acre, and of private lands 20s. per acre in respect of the surface actually occupied; the rents for dredging leases are 2s. 6d. per acre in respect of Crown lands, and as assessed by the Warden in open court in respect of private lands. Royalties are payable to the Crown in respect of all minerals won, viz., coal and shale 6d. per ton; other minerals 1 per cent. of the value, or in the case of those recovered from private lands where



the minerals are not reserved to the Crown, 5 per cent. of the net annual profits of working the mines or winning the minerals. Royalty is remitted in the case of minerals, other than coal and shale, won from Crown lands under lease, other than for dredging, if the value of the gross output in a year does not exceed £500. The royalties received during the year 1922 amounted to £129,099, of which £413 was in respect of land held under permits, and the balance from land under lease.

#### ENCOURAGEMENT OF PROSPECTING.

The State Legislature votes a certain sum each year to encourage prospecting for minerals and to assist miners to open up new fields. The vote is administered by the Prospecting Board, which consists of the Under-Secretary for Mines as Chairman, the Government Geologist, the Chief Inspector of Mines, an inspector, the Chief Mining Surveyor, and a geological surveyor. Miners desiring a grant must satisfy the Board that the locality to be prospected is likely to yield the mineral sought, and that the mode of operation is suitable for its discovery.

The amount advanced must be refunded in the event of the discovery of payable mineral by means of the aid.

The following statement shows a summary of the amounts allotted to prospectors for the various minerals; the figures are for calendar years from 1887 to 1895, and thereafter for the years ended 30th June :—

Period.	Amounts allotted to Prospectors for—						Total.
	Gold.	Silver and Lead.	Copper.	Tin.	Coal.	Other Minerals.	
	£	£	£	£	£	£	£
1887-1889	26,332	886	138	34	338	283	28,011
1890-1894	111,878	7,254	1,367	1,261	3,752	3,283	128,795
1895-1900	107,581	4,886	7,762	3,389	...	4,021	127,639
1901-1905	80,636	5,108	10,136	7,828	40	1,430	105,178
1906-1910	38,822	7,986	20,765	3,146	310	871	71,900
1911-1915	50,209	7,557	8,939	5,870	...	4,837	77,412
1916-1920	32,976	4,325	10,057	3,978	90	5,829	57,255
1921	7,375	889	1,330	901	863	1,286	12,644
1922	9,052	1,537	1,250	1,663	850	659	15,011
Total ...	464,861	40,428	61,744	28,070	6,243	22,499	623,845

In each year some of the prospectors fail to complete the works for which aid has been granted, and the amounts allotted are not paid in full; the total amount expended to the end of 1922 in encouraging prospecting was £526,698.

The Commonwealth Government has offered a reward of £50,000 for the discovery of petroleum oil in Australia; and the Government of New South Wales has offered a reward of £1,000 for the discovery of a new mineral field, and has promised a bonus of £10,000 for the production of 100,000 gallons of petroleum in the State.

#### LABOUR AND MACHINERY.

Mining leases and permits contain conditions as to the minimum number of men to be employed; the usual labour conditions in respect of mining leases of Crown lands and of leases or agreements to mine on private lands are as follows :—For coal, shale, mineral oils, petroleum, or natural gas, for first twelve months of term granted, 2 men to 320 acres, thereafter 4 men; for gold, 1 man to 5 acres during the first year, and thereafter

1 man to 2 acres; for other minerals, 1 man to 20 acres during the first year, thereafter 1 man to 10 acres. For dredging leases the prescribed labour is in the proportion of 7 men to 100 acres. The labour conditions may be suspended in cases where low prices for the products or other adverse circumstances affect the working of a mine.

The extent to which the mining industry has provided employment is indicated in the following statement of the approximate number of men employed in the last five years:—

Year.	Metalliferous.						Coal and Shale.	Total number of men employed.
	Gold.	Silver, Lead, and Zinc.	Copper.	Tin.	Other.	Total.		
1918	2,540	5,105	1,529	2,352	2,121	13,647	16,266	29,913
1919	1,656	4,286	1,148	2,171	2,150	11,411	17,658	29,069
1920	1,712	1,541	583	1,822	2,220	7,878	19,395	27,273
1921	952	2,405	68	1,169	865	5,459	20,973	26,432
1922	715	2,181	52	751	866	4,565	21,704	26,269

These figures have been amended since last issue by the exclusion of the persons engaged in the treatment of ores at the mines and those employed at cokeworks and in the manufacture of lime and cement at limestone quarries. There has been a marked decline in the number of metalliferous miners since 1918; the decrease may not have been so great as indicated, because it is probable that the figures for the year 1918 to 1920 are overstated, the gross number of miners being included in some cases instead of the average number employed. The figures for 1921 and 1922 represent the sum of the average number employed at each mine in operation.

The value of the machinery used in connection with mining in 1921 and 1922 is shown below:—

Machinery.	1921.			1922.		
	Metalliferous Mines.	Coal and Shale Mines.	Total.	Metalliferous Mines.	Coal and Shale Mines.	Total.
	£	£	£	£	£	£
Winning, Weighing, Ventilating, etc.	924,870	3,614,955	4,539,825	797,923	3,713,263	4,511,186
Hauling to Wharf or Railway.	122,481	2,561,172	2,683,653	116,077	2,573,399	2,689,476
Other ... ..	434,615	460,730	895,345	374,960	567,918	942,878
Total ... ..	1,481,966	6,636,857	8,118,823	1,288,960	6,854,580	8,143,540

The value of the machinery employed in mining operations represents 55 per cent. of the total value; 33 per cent. is used for transporting the minerals from the surface of the mine to a wharf or railway station. In some cases mine owners have constructed railway lines for the purpose of connecting the mines with the State railway system or with wharves; particulars being shown on page 102 of this Year Book. Machinery is used extensively in the coal mines, where 2,441,082 tons, or 22 per cent. of the total output were cut by machines during 1922; of 283 machines in use, 153 were operated by electricity and 130 by compressed air.

## PRICES OF MINERALS.

The prices of the principal metals are regulated by the world's production in relation to the world's demands, as the local demand is small. The quotations in the following table for silver, lead, copper, and tin are the average spot prices on the London Exchange.

Year.	Silver.	Lead.	Zinc.	Copper.	Tin.
	per oz. s. d.	per ton. £ s. d.	per ton. £ s. d.	per ton. £ s. d.	per ton. £ s. d.
1913	2 3·6	18 6 2	22 14 3	68 5 9	201 14 0
1914	2 1·3	18 13 9	23 6 8	59 11 3	151 2 9
1915	1 11·7	22 17 8	66 13 8	72 12 9	164 4 0
1916	2 7·3	30 19 6	68 8 11	116 1 3	182 3 5
1917	3 4·9	30 0 0	52 3 6	125 2 5	237 13 1
1918	3 11·6	30 2 8	52 3 11	115 11 6	329 11 3
1919	4 9·1	28 3 11	42 5 3	90 19 4	257 9 8
1920	5 1·6	38 4 7	45 4 6	97 12 5	296 1 7
1921	3 0·9	22 14 4	26 4 1	69 8 7	165 6 7
1922	2 10·4	23 15 9	29 15 0	62 3 6	159 10 9

The prices of metals rose to an abnormal height during the war period, then declined rapidly as the overseas demand decreased.

## PRICES OF COAL.

Prices of coal depend to a greater extent upon local factors. The price varies considerably in the three districts in which coal is mined, the northern coal being the dearest and the western the cheapest. The following statement shows the average value per ton at the pits mouths in the various districts during the last ten years:—

District.	1913	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Northern ...	7 10	7 8	7 7	9 1	11 5	11 8	13 6	15 3	17 7	17 6
Southern ...	6 1	6 4	6 11	7 2	10 0	9 10	11 10	13 4	16 6	16 3
Western...	5 2	5 6	5 6	5 7	8 0	8 8	9 4	11 8	12 10	12 8
All Districts ...	7 3	7 2	7 3	8 2	10 8	10 11	12 7	14 5	16 10	16 9

The large increases in the prices of coal since 1916 have been due to decisions of tribunals appointed by the Commonwealth Government to regulate wages and prices in the industry.

## MINERAL PRODUCTION.

The statistics relating to the production of the mining industry as published in this chapter are obtained from two sources: (1) the records of the Department of Mines, which until the year 1921, were the only data available; and (2) returns for the years 1921 and 1922 collected from owners by the Government Statistician under the authority of the Census Act, 1901. The latter returns relate to the minerals actually mined during the year specified, whereas the records of the Department of Mines relate to the minerals won during the year, and in many instances include the value of metals won from minerals brought to grass in past years.

*Mining Operations.*

The following statement is a summary of the particulars furnished by mine owners in returns under the Census Act regarding the mines in operation and the minerals mined during the years 1921 and 1922 :—

Particulars.	1921.			1922.		
	Metalliferous Mines.	Coal and Shale Mines.	Total.	Metalliferous Mines.	Coal and Shale Mines.	Total.
Mines working ... ..	350	143	493	352	148	500
Average time worked— Months	7.15	10.49	9.91	10.59	10.51	10.52
Employees—						
Above ground ... ..	3,173	5,385	8,558	2,638	5,841	8,479
Below ground ... ..	2,286	15,588	17,874	1,927	15,863	17,790
Total ... ..	5,459	20,973	26,432	4,565	21,704	26,269
	£	£	£	£	£	£
Salaries and Wages paid	788,246	5,703,999	6,492,245	906,974	5,570,830	6,477,804
Value of Land, Building, etc.	206,014	3,222,721	3,428,735	202,941	3,501,841	3,704,782
Value of Machinery ... ..	1,481,966	6,636,857	8,118,823	1,288,960	6,854,580	8,143,540
Value of Tools replaced, etc.	16,737	196,834	213,571	26,401	188,158	214,559
Value of Materials used	154,252	925,803	1,080,055	295,376	832,421	1,127,797
Value of Fuel consumed	129,753	346,941	476,694	151,113	309,143	460,256
Value of Output ... ..	2,142,179	9,036,474	11,178,653	2,951,375	8,293,135	11,244,510

As compared with 1921, the number of employees in metalliferous mines was less in 1922, but the value of the materials used and of the output was higher; in the coal and shale mines the average number of employees was greater, though the operations, as indicated by the value of materials, fuel, etc., and the output, seem to have been on a lower scale.

The value of production, as stated, represents the value at the mines during each year, and before treatment, of the output from the mines. The value of the tools replaced includes the value of tools used by the mine employees in mining and the value of the materials used in constructing or repairing the plant or machinery of the mines.

The relation between the value of the output in each year and the various factors which comprise the value is shown below :—

Particulars.	1921.			1922.		
	Metalliferous Mines.	Coal and Shale Mines.	Total.	Metalliferous Mines.	Coal and Shale Mines.	Total.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Materials used ... ..	7.2	10.2	9.7	10.0	10.0	10.0
Tools replaced, etc. ... ..	0.8	2.2	1.9	0.9	2.3	1.9
Fuel consumed ... ..	6.1	3.8	4.3	5.1	3.7	4.1
Salaries and Wages paid	36.8	63.1	58.1	30.7	67.2	57.6
Balance for Overhead Charges and Profit.	49.1	20.7	26.0	53.3	16.8	26.4
Total ... ..	100	100	100	100	100	100

The value of materials, fuel, etc., represented only a small proportion of the value of the output, viz., 16 per cent., while wages, overhead charges, and

profits absorbed 84 per cent. In metalliferous mining, salaries and wages represented about one-third, and the balance for expenses and profits about half, of the value of the output. In view, however, of the unusual conditions prevailing at Broken Hill, the principal metalliferous field, the experience of the last two years may not indicate a normal distribution. In coal and shale mines wages and salaries represented more than two-thirds of the value of output in 1922.

*Minerals Won—Value and Quantity.*

Satisfactory statistics in regard to the production of the various minerals cannot be obtained. The values of the ores are estimated after assay, but many of the metals are associated in the same mineral matter, so that it is extremely difficult to make a reliable estimate of their quantity and value. The final process of treatment in many cases is carried on in other States, and in some cases outside Australia.

The figures shown in the following tables are based on those published in the annual reports of the Department of Mines, and the particulars regarding the output of iron made from scrap, Portland cement, lime, and coke has been deducted from the values shown in the reports, as they are included in the production of the manufacturing industry; the figures include, in many cases, the value of the ore after treatment at the mines.

The average annual value of the minerals won in each quinquennial period since 1856 is shown below :—

Period.	Average Annual Value of Production.	Period.	Average Annual Value of Production.
	£		£
1856-1860	1,213,824	1896-1900	5,168,273
1861-1865	1,996,079	1901-1905	5,873,176
1866-1870	1,400,291	1906-1910	8,330,883
1871-1875	2,153,646	1911-1915	10,169,752
1876-1880	1,836,803	1916-1920	10,823,478
1881-1885	2,476,368	1921	12,066,370
1886-1890	3,728,080	1922	12,958,008
1891-1895	5,240,666		

The value of the minerals won during 1922 was 55 per cent. higher than the average of the period 1911-1915, but the increase was due to higher prices rather than to larger output, except in the case of coal, of which the quantity has risen as well as the price.

The estimated value of the minerals won from the commencement of mining operations to the end of the year 1922 is shown below :—

Mineral.	Estimated Value of Minerals Won.					
	To the end of 1900.	1901 to 1910.	1911 to 1920.	1921.	1922.	To the end of 1922.
	£	£	£	£	£	£
<b>Metals—</b>						
Gold ...	48,740,533	9,250,960	4,864,440	217,370	107,139	63,180,442
Silver and lead...	30,761,699	23,061,857	34,210,268	1,327,364	2,574,108	91,935,296
Copper ...	8,093,657	2,520,552	4,641,869	41,267	36,233	15,333,578
Zinc ...	157,066	4,201,625	9,057,088	283,455	1,157,458	14,856,692
Tin ...	6,787,933	1,894,513	3,659,851	163,451	154,698	12,660,446
Iron (Pig) ...	...	421,633	2,869,249	639,376	248,909	4,179,167
<b>Non-Metals—</b>						
Coal ...	37,315,915	24,944,593	43,607,113	9,078,388	8,507,946	123,453,955
Shale ...	1,929,134	321,947	297,815	77,380	60,641	2,686,917
Opal ...	456,599	781,300	260,285	13,020	15,150	1,526,354
Limestone flux	555,423	123,784	206,351	41,834	21,087	948,479
Sundry minerals	582,227	652,307	1,282,220	183,465	74,939	2,774,858
<b>Total ...</b>	<b>135,380,186</b>	<b>68,175,071</b>	<b>104,956,549</b>	<b>12,066,370</b>	<b>12,958,008</b>	<b>333,536,184</b>

At the end of the year 1900 the value of the gold won exceeded that of any other mineral, but with the subsequent decline in gold mining and the development of the coal and silver-lead fields, coal advanced rapidly to the head of the list, and the value of the silver and lead surpassed the output of gold. At the end of 1922 the value of the coal production represented 37 per cent. of the total value, silver and lead 27 per cent., and gold 19 per cent.

The following statement shows the quantity of the various minerals won in 1921 and 1922 in comparison with the average annual output in the previous years 1909-13, also the total yield to the end of 1922 :—

Minerals.	Annual Output.			Total Output to end of 1922.
	Average, 1909-13.	1921.	1922.	
Gold ... .. oz. fine	177,928	51,173	25,222	14,873,931
Silver ... .. " "	1,968,696	1,963,379	749,904	45,193,839
Silver-lead ore, &c. ... .. tons	332,408	53,507	199,585	9,572,810
Lead—Pig, &c. ... .. " "	18,950	20,353	8,113	326,621
Zinc-spelter and concentrates ... .. " "	477,218	79,694	363,681	4,873,607
Copper ... .. " "	10,490	499	625	262,245
Tin ingots and ore ... .. " "	2,167	1,595	1,144	126,708
Iron—Pig (from local ores) ... .. " "	40,564	90,053	54,856	860,934
Iron oxide ... .. " "	2,960	3,109	1,381	47,172
Ironstone flux ... .. " "	1,659	7,473	980	132,655
Chrome iron ore ... .. " "	135	62	529	35,241
Wolfram ... .. " "	175	...	...	2,260
Scheelite ... .. " "	110	...	...	1,690
Platinum ... .. oz.	459	249	80	16,018
Molybdenite ... .. tons	46	...	2	801
Antimony ... .. " "	88	125	...	19,032
Manganese ore ... .. " "	...	3,515	2,398	25,828
Coal ... .. " "	8,836,994	10,793,387	10,183,133	277,657,052
Shale ... .. " "	59,024	32,489	23,467	1,917,836
Alunite ... .. " "	226	520	185	55,072
Limestone flux ... .. " "	44,820	111,558	56,231	1,864,884
Diamonds... .. carats	4,533	1,563	1,000	201,499

With the exceptions of coal, pig-iron, chrome, manganese, and limestone flux, the output in 1922 of the minerals enumerated was below the average yield in the years 1909-13. The decline was due to decreased demand for industrial metals, for, with high costs of production, the margin over expenses was in many cases too low for the profitable exploitation of the mineral deposits.

#### GOLD.

Though gold had been found in New South Wales in earlier years, the history of gold-mining in the State dates from 1851, when its existence in payable quantities was proved by E. H. Hargraves, and the principal gold-fields were discovered. The deposits which have been mined include various types, *e.g.*, alluvial gold, auriferous reefs or lodes, impregnations in stratified deposits and igneous rocks, and irregular deposits, as in auriferous ironstone.

Many rich alluvial deposits in which gold was easily accessible were exploited during the twenty years 1851-1870, and when it became necessary to introduce expensive methods of mining the production declined. During the period of general depression which followed the financial crisis of 1893 greater attention was paid to prospecting for minerals, and with the development of new processes the output of gold showed considerable improvement. During recent years, however, there has been a steady decline, and the yield in 1922 was the lowest recorded in any year since 1851.

The following table shows the quantity and value of the gold won to the end of 1922 :—

Period.	Quantity.	Equivalent in oz. fine.	Value.
	oz. crude.	oz. fine.	£
1851-1860	3,280,963	2,714,531	11,530,583
1861-1870	3,542,912	3,219,628	13,676,102
1871-1880	2,253,259	2,019,116	8,576,655
1881-1890	1,173,885	1,013,846	4,306,541
1891-1900	2,867,337	2,432,387	10,332,120
1901-1910	2,669,670	2,252,851	9,569,492
1911-1920	1,333,796	1,145,185	4,864,440
1921	55,683	51,173	217,370
1922	27,581	25,222	107,139
Total ...	17,205,086	14,873,939	63,180,442

Towards the end of the nineteenth century a system of dredging was introduced for the purpose of recovering alluvial gold from the beds of the rivers which drain auriferous country, and in 1900 the quantity obtained by the dredges was 7,924 oz. of fine gold, valued at £33,660. During the following decade the quantity amounted to 298,416 oz. fine, valued at £1,267,593. Subsequently the output of the dredges declined, the figures for the year 1922 being 8,673 oz. fine, valued at £36,841. Dredges are employed also for the recovery of stream tin; particulars are shown on page 601.

#### SILVER, LEAD, AND ZINC.

The production of lead and zinc in New South Wales is associated closely with the mining of silver, the Broken Hill silver-lead deposits being the main source of the output.

The Broken Hill field was discovered in 1883, and it has become one of the principal mining centres of the world. Up to the end of 1922 approximately 33,500,000 tons of ore had been raised, and it has been estimated that the reserves amount to at least 13,000,000 tons. The lode, varying in width from 10 feet to 400 feet, may be traced for several miles; mining leases held by companies and syndicates extend along its entire length, but operations are confined to an extent of  $3\frac{1}{2}$  miles in the centre. Underneath an outcrop of manganiferous ironstone were found rich oxidised ores, consisting of carbonate of lead and kaolin with silver, and, below these ores, mixed sulphides of lead and zinc with a high silver content. As the depth increased the proportions of silver, lead, and zinc became smaller, and the gangue consisted of rhodonite which causes difficulty in the extraction of the metals.

For some years operations were directed towards the recovery of silver in the ores which contained the metal in payable quantities; the other metals were not recovered because the current price for lead was comparatively low and a method had not been devised by which the lead and zinc in the complex sulphide ores could be separated profitably. Consequently huge dumps of residue and low-grade ores accumulated at the mines until the development of new processes for the separation of the sulphides by means of flotation led to their treatment.

Lead and zinc concentrates have been produced in large quantities at Broken Hill. The former contain lead amounting to 60 or 65 per cent., silver 20 to 25 oz. per ton, zinc 7 to 8 per cent., and sulphur 15 per cent. The zinc concentrates contain zinc, about 45 per cent., lead 6 per cent., silver 10 oz. per ton, and sulphur 30 per cent. The lead concentrates are treated at Port Pirie in South Australia; the greater part of the zinc concentrates is exported to the United Kingdom and other European countries or to Japan, but increasing quantities are being treated in Australia at Risdon, Tasmania.

During 1922 the output of ore from the Broken Hill mines amounted to 640,064 tons, viz., 5,197 tons of oxidised and 634,867 tons of sulphide ore, the value of the output, including the yield from the treatment of zinc tailings, was £4,381,833.

Another silver field of importance, known as Yerranderie, is situated in the Burrigorang Valley. The lodes are small, varying in width from mere threads to 8 feet, but they are exceptionally rich. The bulk of the silver is associated with galena, which contains up to 160 oz. per ton; second-grade ores contain from 40 to 80 oz. per ton. The Yerranderie field is handicapped by the high cost of haulage along a steeply-graded road to the nearest railway, therefore only first-grade ore is despatched from the mines, the lower grades being stacked for concentration or future treatment.

Smaller silver fields are situated in various parts of the State.

It is difficult to assess the quantity and value of the various metals won from the silver-lead ores mined in New South Wales as the process of extracting the metallic contents is conducted for the most part outside the boundaries of the State. The Department of Mines estimates the total value on the basis of the metal produced within the State and the value of the ore, concentrates, etc., not smelted within the State, as declared by the several companies at the date of export from the State. The following table is a summary of the Department's records of the quantity and value of the silver and lead produced in New South Wales from local ores, and the quantity and value of silver-lead and zinc concentrates produced in the State and despatched elsewhere for treatment:—

Period.	Silver.	Silver-sulphide, Silver-lead, Ore, etc.		Lead-Pig, in Matte, etc.	Zinc Concentrates.
		Ore Concentrates, etc.	Metal.		
Quantity.					
	oz.	tons.	tons.	tons.	tons.
To 1885	1,730,297	7,073	191	...	...
1886-1890	2,481,253	165,756	94,002	648	307
1891-1895	3,009,187	663,754	231,847	739	663
1896-1900	2,352,092	1,771,983	86,005	13,293	137,931
1901-1905	4,154,020	1,877,515	108,353	17,550	183,782
1906-1910	8,310,962	1,709,173	42,578	71,435	1,460,138*
1911-1915	12,460,553	1,694,834	...	114,375	2,093,783
1916-1920	7,982,192	866,654	...	80,115	553,628
1921	1,963,379	53,507	...	20,353	79,694
1922	749,904	199,585	...	8,113	363,681
Total ...	45,193,839	9,009,834	562,976	326,621	4,873,607
Value.					
	£	£	£	£	£
To 1885	382,884	237,810	...	...	...
1886-1890	464,081	6,478,515	8,298	3,366	...
1891-1895	445,873	12,615,432	7,413	7,677	...
1896-1900	269,663	9,592,856	258,874	146,023	...
1901-1905	445,051	8,910,586	255,366	440,402	...
1906-1910	892,414	11,561,794	996,646	3,761,223	...
1911-1915	1,302,510	14,302,570	1,899,601	6,861,489	...
1916-1920	1,426,886	12,920,076	2,358,625	2,195,599	...
1921	325,163	539,339	462,862	283,455	...
1922	112,077	2,267,319	194,712	1,157,458	...
Total ...	6,066,602	79,426,297	6,442,397	14,856,692	...

\* Includes 2,758 tons of spelter.



The total value of the production, as shown above, amounted to £3,731,566 in 1922, as compared with £1,610,819 in the preceding year. The value was highest in 1918 when the market conditions were exceptionally favourable, but in the following year industrial troubles arose which caused a prolonged cessation of operations at Broken Hill, the mines being idle from May, 1919, until November, 1920, when there was a partial resumption; in the meantime prices had fallen considerably and the operations have since been restricted.

As previously stated, the bulk of the ores produced in the silver-lead mines is exported for treatment to other parts of Australia or despatched in the form of concentrates to overseas countries, therefore the figures shown in the preceding table do not indicate fully the importance of the mines of New South Wales in respect of the production of the various metals. The Department of Mines has collected records from the various mining and smelting companies and ore-buyers with the object of ascertaining the actual value accruing to the Commonwealth from the silver-lead mines of this State. Thus particulars have been obtained regarding the quantity and value of the silver, lead, and zinc extracted within the Commonwealth, and the gross metallic contents of concentrates exported overseas have been estimated on the basis of average assays as follows. In the case of the lead and zinc contents, the quantities have been estimated only when payment was allowed for them.

Year.	Metal obtained within Commonwealth from ores raised in New South Wales.				Concentrates exported oversea.					Total Value of Production from Silver-lead Ores of New South Wales.
	Silver.	Lead.	Spelter.	Aggregate Value.	Quantity.	Contents by average assay.			Assessed Value.	
						Silver.	Lead.	Zinc.		
	oz. fine.	tons.	tons.	£	tons.	oz. fine.	tons.	tons.	£	£
1918	8,724,018	155,306	5,622	6,744,034	48,494	535,943	3,178	21,926	232,210	6,976,244
1919	5,836,947	80,175	7,119	4,109,466	38,740	417,871	2,425	18,146	253,751	4,363,217
1920	196,111	1,719	10,565	515,728	46,425	479,221	3,025	21,742	274,061	789,789
1921	3,624,413	47,426	1,425	1,723,864	47,127	617,477	6,539	19,272	261,238	1,985,102
1922	6,648,825	97,867	23,724	4,113,427	287,074	3,264,162	19,328	132,136	1,272,074	5,385,501

## COPPER.

The ores of copper are distributed widely throughout New South Wales; the deposits of commercial value are situated for the most part in the central portion of the State, the most important fields being in the Cobar and Canbelego districts. Copper mining has been handicapped severely in many places by the high cost of transport to market, and as the price fluctuates considerably, operations have been intermittent. Large quantities of low-grade ores are available, and when the market is favourable they may be treated profitably.

The quantity and value of the copper won in New South Wales since 1858, as estimated by the Department of Mines, is shown below :—

Period.	Ingots, Matte, and Regulus.		Ore.		Total Value.
	Quantity.	Value.	Quantity.	Value.	
	tons.	£	tons.	£	£
1858-1879	14,877	1,015,206	2,102	52,464	1,067,670
1880-1884	23,715	1,553,651	19	675	1,554,326
1885-1889	15,160	771,867	537	6,937	778,804
1890-1894	10,195	434,537	1,738	20,228	454,765
1895-1899	25,408	1,280,841	852	5,253	1,286,094
1900-1904	32,173	1,907,540	8,791	106,500	2,014,040
1905-1909	41,425	2,940,886	3,057	31,367	2,972,253
1910-1914	42,277	2,443,385	9,815	86,169	2,529,554
1915-1919	22,626	2,403,884	5,064	66,710	2,470,594
1920	1,290	127,978	...	...	127,978
1921	499	41,267	...	...	41,267
1922	575	35,583	50	650	36,233
Total ...	230,220	14,956,625	32,025	376,953	15,333,578

The marked decrease in the output of copper during the last two years was due to a fall in price, which precluded profitable working under existing costs and not to a decline in the productive capacity of the mines. In 1923 the price showed a tendency to rise, and it is probable that the output will be increased.

#### TIN.

Tin, unlike copper, is restricted in its geographical and petrological range, and is the rarest of the common metals in commerce. The lodes discovered in New South Wales are numerous, but they are on a small scale; the maximum depth attained is about 360 feet.

Tin ore occurs in the northern, southern, and western divisions; but the areas in which workable quantities are known to exist are on the western fall of the New England Tableland, with Emmaville and Tingha as the chief centres, and at Ardlethan in the southern district. Alluvial deposits of stream tin are exploited by means of dredging in the northern rivers.

Tin has contributed in a very considerable degree to the total production of the mineral wealth of the State, although its aggregate yield, in point of value, is below that of coal, silver, gold, copper, and zinc.

The output and the value of production of tin since 1872 have been as follows :—

Period.	Ingots.		Ore.		Total Value.
	Quantity.	Value.	Quantity.	Value.	
	tons.	£	tons.	£	£
1872-1879	18,364	1,386,764	12,995	628,643	2,015,407
1880-1884	22,842	2,056,778	2,700	137,755	2,194,533
1885-1889	12,974	1,330,326	1,635	85,048	1,415,374
1890-1894	7,196	623,096	1,040	49,296	677,392
1895-1899	4,608	336,015	197	6,488	342,503
1900-1904	4,220	536,084	1,222	81,362	617,446
1905-1909	5,567	851,956	3,712	339,679	1,191,635
1910-1914	4,258	785,900	6,952	775,841	1,561,741
1915-1919	5,203	1,188,995	5,798	723,477	1,912,472
1920	*	*	2,486	413,794	413,794
1921	*	*	1,595	163,451	163,451
1922	734	114,076	410	40,622	154,698
Total ...	85,966	9,214,990	40,742	3,445,456	12,660,446

\* Included under the heading, "Ore."

The output of ore in 1920 and 1921 includes ore from which were extracted 887 tons of metallic tin, valued at £257,514, and 816 tons, valued at £133,521, respectively.

In 1922, 36 pump dredges and 2 bucket dredges were employed in recovering tin in the northern districts. Operations were hampered by unfavourable weather conditions, and the quantity obtained was only 422 tons, valued at £41,467, as compared with 768 tons, valued at £76,550. The total yield by dredging since 1901 has been 23,443 tons, valued at £2,830,030.

#### IRON AND IRON ORES.

Iron ore of good quality occurs in many parts of New South Wales. The most extensive deposits are at Cadia, where 10,000,000 tons may be recovered economically; at Carcoar, where a large quantity has been produced; and at Goulburn and Queanbeyan, each containing about 1,000,000 tons; at Wingello there are about 3,000,000 tons of aluminous ores of low grade. It has been estimated that in the known deposits, excluding Wingello ores, there are 15,000,000 tons which may be recovered by quarrying, and that a much greater quantity may be obtained by more costly methods of mining.

Prior to 1907 iron ore was mined principally for use as flux in smelting other ores, although in 1884, at Mittagong, and in later years at Lithgow, the production of pig-iron from local ores had been attempted without permanent success. Following a reorganisation and remodelling of the Eskbank Ironworks, Lithgow, the production of iron ore has been on a more extensive scale since 1907, although only the Cadia, Carcoar, and smaller deposits have been mined.

The production of pig-iron from local ores since 1907, and the materials used therein, are shown in the following table. The output prior to that year was principally from scrap iron:—

Year.	Minerals Used.			Pig-iron.	
	Iron Ore.	Coke.	Limestone.	Production.	Value.
	tons.	tons.	tons.	tons.	£
1907-11	263,477	191,589	113,360	152,627	567,048
1912-16	486,929	385,014	172,532	283,264	1,035,302
1917-21	671,153	578,938	282,984	370,187	2,327,968
1922	110,972	75,876	30,397	54,856	248,909

Further details relating to the operations of ironworks are given in the section of this book dealing with the manufacturing industries.

#### *Ironstone Flux.*

Iron ore is used as flux in smelting and iron works, and the estimated quantity of ironstone flux raised during the years 1899 to 1922 was 132,655 tons, and the value £108,791. The quantity produced during 1922 was 980 tons, valued at £1,274.

#### *Iron Oxide.*

Iron oxide is obtained in the Port Macquarie, Moss Vale, and Yass districts for use in purifying gas or as a pigment. The output during 1922 was 1,381 tons, valued at £2,917, and the total output to the end of 1922 was 47,172 tons, valued at £59,201.

## OTHER METALS.

*Platinum*.—Platinum occurs in several districts of New South Wales, but platinum mining is comparatively unimportant. The quantity produced to the end of 1922 amounted to 16,018 oz., valued at £69,029, of which 80 oz., valued at £1,182, were obtained during 1922.

*Chromite*.—Chromite, or chromic iron ore, is the only commercially important ore of chromium; it is found usually in association with serpentine. The principal deposits are in the Gundagai and Tumut districts, and there are smaller quantities in the northern portion of the State. The quantity produced to the end of 1922 was 35,241 tons, valued at £111,922; the yield recorded in 1922 was 529 tons, valued at £1,095.

*Tungsten ores*.—These ores occur in many localities in New South Wales generally in association with tinstone (cassiterite), bismuth, and molybdenite. The output of scheelite since 1903 amounted to 1,690 tons, valued at £192,375, and of wolfram to 2,260 tons, valued at £267,450; there has been no production since 1920.

*Antimony*.—This mineral may be obtained in a number of districts, the principal field being at Hillgrove. Owing to fluctuations in the price of the metal, mining is spasmodic; the total output of antimony to the end of the year 1921 was 19,032 tons, valued at £344,588, and no ore was raised during the following year.

*Manganese*.—Manganese ores have been discovered in various places but generally in localities which lack facilities for transport. During the year 1922 the quantity obtained was 2,398 tons, valued at £7,194.

*Bismuth*.—Bismuth has been obtained chiefly in the neighbourhood of Glen Innes, and at Whipstick in the South Coast division, and in other districts bismuth is associated with molybdenite and wolfram ores. The quantity of bismuth produced in 1922 was 5 tons, valued at £939, the quantity produced to the end of 1922 being 773 tons of ore, valued at £224,779.

*Molybdenum*.—The production of molybdenite, the principal ore of molybdenum, in New South Wales during 1922 amounted to 2 tons, valued at £320. Since 1902 there have been produced 801 tons, valued at £205,820.

*Mercury*.—Cinnabar, the most important ore of mercury, occurs in numerous localities, but it has not been discovered in a sufficiently concentrated form to enable it to be wrought profitably. No production of quicksilver has been recorded since 1916.

## COAL.

The coal-fields of New South Wales are the most important in Australia, both as regards extent and the quantity and quality of coal produced.

The main coal basin extends along the coast from Port Stephens on the north, to Ulladulla on the south, with a seaboard of 200 miles, which enhances the value of the deposits by facilitating shipment and the development of over-sea trade. From Ulladulla the basin trends inland to the west and north-west as far as Rylstone, whence the boundary line extends northward beyond Gunnedah, and then runs in a south-easterly direction to Port Stephens. The widest part of the area is between Rylstone and Newcastle—100 miles; the basin is deepest in the neighbourhood of Sydney, where the uppermost seam is nearly 3,000 feet below the surface.

From Sydney the measures rise gradually in all directions, and emerge to the surface at Newcastle on the north, at Bulli in the Illawarra district to the south, and at Lithgow, in the Blue Mountain region, to the west.

The Upper or Newcastle coal measures show the greatest surface development. In the northern field they are known to contain twelve seams, five being worked; in the southern, seven distinct seams are known, and three have been worked; of the seven seams traced in the western field only three are of commercial value. After many unsuccessful boring operations, the uppermost seam of the Newcastle measures was located under Sydney Harbour in 1891; it was worked for some years to a depth of nearly 3,000 feet, but the mine has been closed.

The coal obtained at Newcastle is suitable for gas making and for household use; the coal from Bulli and Lithgow is essentially steam coal; the southern coal produces a strong coke, specially suitable for smelting purposes by reason of its capacity for sustaining the weight of the ore burden in a blast furnace, and it contains less ash than the western. The coal obtained at the Sydney Harbour Colliery was a good steam coal, and it could be loaded direct into oversea steamers from a wharf near the pit's mouth.

In the western and southern fields the upper coal measures contain deposits of shale suitable for the manufacture of kerosene oil and for the production of gas. Deposits of kerosene shale, though much less extensive, occur in the upper and Greta measures of the northern coal-field.

The middle coal measures outcrop near East Maitland, but do not appear in the western field; their occurrence in the southern field has not been proved definitely.

The lower or Greta measures outcrop over an irregular area in the neighbourhood of Maitland, and have been traced with intervening breaks as far north as Wingen; they occur as an isolated belt to the north of Inverell, and extend through Ashford, almost to the Queensland border. These measures have been located in the Clyde Valley, in the extreme southern portion of the Illawarra field, but do not occur in the western. The coal of the Greta measures is contained in two seams, and is the purest and generally the most useful obtained in the State, being of a good quality, hard, and economical as regards working. The Greta seams are worked extensively between West Maitland and Cessnock, in the most important coal-mining district in Australia, and at Muswellbrook.

Coke-making is carried on in each of the three coal-mining districts, as well as in the gasworks in various parts of the State.

There were 155 coal-mines and 2 shale-mines working under the provisions of the Coal Mines Regulation Act during the year 1922. The employment of boys under 14 years of age or of women and girls in or about a mine is prohibited, and restrictions are placed upon the employment of youths. In 1922 the total number of boys between 14 and 16 years of age employed in coal and shale mines was 773, of whom 502 worked below ground, and 271 on the surface.

#### *State Coal-mine.*

The State Coal-mines Act, 1912, empowers the Government to purchase or resume coal-bearing lands or coal-mines and to open and work coal-mines upon Crown land or upon private land containing coal reserved to the Crown or acquired for the purpose of a State coal-mine. The coal obtained from a State mine is to be used only by the State Departments or undertakings.

A State coal-mine was opened at Lithgow, in the Western district, in September, 1916; the area of the land containing coal reserved for the

Crown amounts to about 40,200 acres, and the available supply of coal has been estimated at 240,000,000 tons. The mine, which was closed in July, 1917, was taken over by the Railway Commissioners in the early part of 1921, and work is in progress for the development of the mine. The output from the mine in 1922 was 185,749 tons.

### *Production of Coal.*

The following table shows the quantity and value of coal raised in New South Wales to the close of 1922, the total production being 277,657,052 tons, valued at £123,453,955 :—

Period.	Coal Raised.	Value at Pit's Mouth.	Average value per ton.
	tons.	£	s. d.
Prior to 1890	46,803,983	22,787,156	9 9
1890-4	17,830,177	6,811,568	7 8
1895-9	21,334,976	6,048,281	5 8
1900-4	29,792,589	10,369,050	7 0
1905-9	39,083,328	13,234,796	6 9
1910-4	47,555,714	17,344,973	7 4
1915-19	43,563,766	21,548,442	9 11
1920	10,715,999	7,723,355	14 5
1921	10,793,387	9,078,388	16 10
1922	10,183,133	8,507,946	16 9
Total ...	277,657,052	123,453,955	8 11

The bulk of production is obtained from the northern coal-fields. The output of each district during 1922 was :—Northern, 7,156,921 tons, valued as £6,250,977; Southern, 1,878,594 tons, £1,530,106; Western, 1,147,618 tons, £726,863.

A statement regarding the value at the pit's mouth of the coal raised in each district is shown on page 593.

The following statement shows the quantity of New South Wales coal consumed in Australia, including bunker coal taken by interstate vessels, and the overseas exports, annually, since 1917 :—

Year.	Domestic Consumption	Sent to other Australian States.	Total quantity consumed in Australia.	Exported to Oversea Countries.	Total Production.
	tons.	tons.	tons.	tons.	tons.
1917	5,029,070	2,225,228	7,254,298	1,038,569	8,292,867
1918	5,641,500	2,697,033	8,338,533	724,643	9,063,176
1919	5,128,536	1,891,317	7,019,853	1,611,701	8,631,554
1920	5,729,208	2,270,556	7,999,764	2,716,235	10,715,999
1921	5,268,628	2,752,810	8,021,438	2,771,949	10,793,387
1922	4,943,736	2,841,253	7,784,989	2,398,144	10,183,133
Per cent. of Total.					
1917	60·7	26·8	87·5	12·5	100
1918	62·2	29·8	92·0	8·0	100
1919	59·4	21·9	81·3	18·7	100
1920	53·5	21·2	74·7	25·3	100
1921	48·8	25·5	74·3	25·7	100
1922	48·5	27·9	76·4	23·6	100

The domestic consumption of coal has decreased during the last two years as a result of restricted operations in many important manufacturing industries, *e.g.*, iron and steel works. The export trade was brisk during 1921, when the coal-mines in Great Britain were closed owing to an industrial dispute, and in 1922, when a coal strike occurred in the United States.

Particulars of the domestic consumption of coal in 1922 are as follows:—

	tons.
Used as fuel in factories ... ..	1,129,895
„ in mines ... ..	431,942
„ on railways ... ..	839,341
„ in electric light and power works. ... ..	524,367
„ in gas making ... ..	551,971
„ in coke making ... ..	654,374
„ for other purposes ... ..	811,846
	<hr/> 4,943,736

## OIL SHALE.

Oil-bearing mineral, which is a variety of torbanite or cannel coal, known locally as kerosene shale, has been found in many localities in New South Wales, the most important deposits being in the Capertee and Wolgan valleys.

The production of oil shale, from the opening of the mines in 1865 to the end of 1922, is shown in the following table:—

Period.	Quantity.	Total Value at Mines.	Average Price per ton at Mines.	Period.	Quantity.	Total Value at Mines.	Average Price per ton at Mines.
	tons.	£	£ s. d.		tons.	£	£ s. d.
1865-84	370,217	828,195	2 4 9	1915-19	122,408	144,871	1 3 8
1885-89	186,465	406,255	2 3 7	1920	21,004	46,082	2 3 10
1890-94	247,387	451,344	1 16 6	1921	32,489	77,380	2 7 8
1895-99	191,763	222,690	1 3 3	1922	23,467	60,641	2 11 8
1900-04	213,163	177,246	0 16 8				
1905-09	213,024	131,456	0 12 4				
1910-14	296,449	149,757	0 9 6	Total ...	1,917,836	2,686,917	1 8 0

In the years 1910-1913 the Commonwealth Government paid a bounty on kerosene and paraffin wax made from Australian shale, and since 1917 has provided a bounty on crude shale oil. The amount of bounty paid in 1921-22 was £18,400.

## DIAMONDS.

Diamonds and other gem-stones are distributed widely in New South Wales, but an extensive field has not been discovered. The finest of the New South Wales diamonds are harder and whiter than the South African, and are equal to the best Brazilian gems.

The following table shows the output of diamonds as recorded, but it is probable that the actual output was much greater. The majority of the diamonds have been obtained from the mines in the Bingara and Copeton districts; in recent years the whole output has been from the latter district:—

Period.	Carats.	Value.	Period.	Carats.	Value.
		£			£
1867-1885	2,856	2,952	1906-1910	16,651	12,374
1886-1890	8,120	6,390	1911-1915	16,003	13,353
1891-1895	19,743	18,245	1916-1920	11,973	12,573
1896-1900	69,384	27,948	1921	1,563	1,915
1901-1905	54,206	46,434	1922	1,000	1,360

## OPAL.

Precious opal occurs in two geological formations in New South Wales, viz., in tertiary vesicular basalt and in Upper Cretaceous sediments. The most important deposits are in the Upper Cretaceous rocks at White Cliffs and Lightning Ridge. Gems from the latter field are remarkable for colour, fire, and brilliancy; the opals from vesicles in the tertiary basalt at Tintenbar in the North Coast division resemble the Mexican gems.

The following table shows the estimated value of precious opal won in New South Wales to the end of 1922 :—

Period.	Value.	Period.	Value.
	£		£
1890	15,600	1916-1920	105,547
1891-1895	25,999	1921	13,020
1896-1900	415,000	1922	15,150
1901-1905	476,000		
1906-1910	305,300		
1911-1915	154,738	Total ...	1,526,354

## ALUNITE.

Alunite, or alumstone, occurs at Bullahdelah, about 35 miles from Port Stephens, in a narrow mountain range which for more than a mile is composed almost entirely of alunite, of greater or less purity. Four varieties of alunite are recognised at the mines, but operations are confined mainly to the light-pink ore, the yield averaging about 80 per cent. of alum.

In 1922 the production of alunite was 185 tons, valued at £740, and the quantity exported since 1890 was 55,072 tons, valued at £196,327. The whole of the output is exported to England.

## OTHER MINERALS.

*Marble.*—Beds of marble of great variety of colouring, and with highly ornamental markings, are located in many districts of New South Wales. Much of the marble is eminently suitable for decorative work. The marble obtained during 1922 was valued at £1,900.

*Limestone.*—The quantity of limestone raised for flux in 1922 was 56,231 tons, valued at £21,087.

*Fireclays.*—Fireclays of good quality are found in the permo-carboniferous coal measures, and excellent clays for brick-making, pottery, etc., may be obtained in the State.

*Magnesite.*—Magnesite is distributed widely, but few deposits are of commercial value. Large quantities have been mined at Fifield, Attunga, and Barraba. The output during 1922 was 3,370 tons, valued at £3,231.

*Diatomaceous earth* occurs in several localities; the principal deposits are situated at Cooma, Barraba, Coonabarabran, and Wyrallah.

*Other Mineral Deposits.*—Other mineral deposits known to exist but not worked extensively include asbestos, barytes, fluorspar, Fuller's earth, ochre, graphite, slate, and mica. Quartzite for the manufacture of silica bricks is obtainable in large quantities.



## QUARRIES.

The Hawkesbury formation in the Metropolitan District provides excellent sandstone for architectural use; the supply is very extensive, and the stone is finely grained, durable, and easily worked. In the north-western portion of the State and in the northern coal districts good building stone is obtainable.

Syenite, commonly called trachyte, is found at Bowral; for building purposes it is solid, and takes a beautiful polish. Granite occurs at many places in the State, and it has been obtained generally in places near the coast, whence it could be transported cheaply.

Basalt or blue metal, suitable for ballasting roads and railway lines and for making concrete, is obtained at Kiama and other localities.

The quantity and value of building stone, ballast, etc., quarried during the year ended 30th June, 1922, are shown below:—

Description of Quarry.	Quantity of Stone raised.	Value of Stone raised.	Description of Quarry.	Quantity of Stone raised.	Value of Stone raised.
<b>Building Stone—</b>	<b>tons.</b>	<b>£</b>	<b>Macadam, Ballast, etc.—</b>	<b>tons.</b>	<b>£</b>
Sandstone ... ..	83,285	37,983	(continued).		
Alunite ... ..	324	1,296	Limestone ... ..	56,201	13,879
Syenite (Trachyte) ...	2,981	3,794	Gravel ... ..	100,997	29,782
Marble ... ..	558	3,495	Sand ... ..	55,425	13,341
Limestone ... ..	7,925	2,580	Ironstone ... ..	48,694	10,960
Granite ... ..	1,726	320	Shale and Clay ...	34,983	8,075
Other ... ..	2,036	1,003	Quartzite ... ..	66,707	15,203
<b>Macadam, Ballast, etc.—</b>			Limestone, crude ...	127,180	33,940
Sandstone ... ..	169,215	42,733	Magnesite ... ..	3,385	4,222
Bluestone, Basalt, etc..	789,516	223,992			

## INSPECTION OF MINES.

The inspection of mines with a view to safeguarding the miners from accident and disease is conducted by salaried officers of the Department of Mines in terms of the Coal Mines Regulation Acts, which apply to coal and shale mines, and the Mines Inspection Acts, which apply to other mines.

The Coal Mines Regulation Acts prescribe that every coal-mine must be under the control and direction of a qualified manager, and daily personal supervision must be exercised by him or by a qualified under-manager. In mines where safety-lamps are used a competent person must be appointed as deputy to carry out duties for the safety of the mine, especially in regard to the presence of gas, the sufficiency of ventilation, the state of the roof and sides, and the supervision of shot-firers.

The Acts contain general rules for the working of coal-mines in regard to such matters as ventilation, sanitation, the inspection and safeguarding of machinery, safety lamps, explosives, security of shafts, etc., and it is provided that an inexperienced person may not be employed in getting coal or shale unless in company with an experienced miner. Special rules are established in each mine for the safety, convenience, and discipline of the employees.

In the mines to which the Mines Inspection Acts relate, a qualified manager, exercising daily personal supervision, must be appointed if more than ten persons are employed below ground, and the machinery must be in charge of a competent engine-driver. General rules are contained in the Act, and the inspectors may require special rules to be constituted for certain mines.

Certificates of competency to act in mines as managers, under-managers, deputies, engine-drivers, and electricians are issued in accordance with the Acts relating to inspection.

Particulars regarding the persons killed or seriously injured in mining accidents during the last five years are shown below :—

Year.	Accidents.				Per 1,000 Employed.			
	Metalliferous Miners.		Coal and Shale Miners.		Metalliferous Miners.		Coal and Shale Miners.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
1918	12	62	11	132	·76	3·39	·65	7·80
1919	6	18	17	100	·42	1·26	·94	5·50
1920	4	12	20	113	·44	1·30	1·00	5·66
1921	4	22	19	113	·47	2·61	·89	5·31
1922	5	25	12	86	·54	2·70	·55	3·97

These figures are not based on the number of employees as shown on page 592; they relate to the total number of persons who are subject to the provisions of the Mining Acts, and include persons engaged in connection with treatment plants at the mines.

In the chapter relating to Employment, particulars are given regarding industrial diseases in mines and the compensation provided in cases of accident and illness.

## PASTORAL INDUSTRY.

IN New South Wales the pastoral industry is confined principally to sheep-raising and wool-growing, although, of late years, cattle-raising has increased in importance. It has always been by far the greatest source of wealth-production among primary industries; but, within the past twenty years, agriculture and dairying have developed rapidly, and the pastoral industry has assumed a place second in importance to the manufacturing industry, as measured by the value of production.†

### LIVE STOCK.

New South Wales does not possess any indigenous animals which would give rise to a large industry, and, of those introduced, sheep only may be said to have developed in such a way as to become a prolific source of wealth-production; indeed, the development of the sheep industries has been so remarkable that it has, in a sense, precluded the rise of other pastoral activities. Horses have been bred principally for their utility in various industries, but a small oversea trade has sprung up in remounts. For many years cattle were produced only to supply local requirements of meat and dairy produce, but since the application of refrigeration to sea cargoes, an export trade in these commodities has become possible, and since 1910 considerable expansion has taken place in the number of cattle depastured in the State. Pigs are bred principally as a by-product of the dairying industry, and the number does not fully meet local requirements.

The following table shows the number of the principal kinds of live stock in New South Wales at the end of each decennial period from 1861 to 1921 and in 1922:—

Year.	Horses.	Cattle.	Sheep.	Pigs.
1861	233,220	2,271,923	5,615,054	146,091
1871	304,100	2,014,888	16,278,697	213,193
1881	398,577	2,597,348	36,591,946	213,916
1891	469,647	2,128,838	61,831,416	253,189
1901	486,716	2,047,454	41,857,099	265,730
1911	639,004	3,194,236	44,947,287	371,093
1921*	663,178	3,375,267	33,851,828	306,253
1922*	669,800	3,546,530	37,177,402	383,669

\* At 30th June, previous years at 31st December.

Particulars of other live stock are shown on page 628.

† See part "Employment and Production" of this Year Book.

To obtain an accurate idea of the varying extent of pastoral pursuits in the State as represented by the number of live stock grazed it is necessary to express the various species in common terms. This, of course, cannot be done with exactitude, but, adopting the arbitrary equivalent of eight sheep to each head of large stock as mentioned in Section 18 of the Pastures Protection Act, the following comparison is obtained :—

Year.	Equivalent in Sheep of Live Stock grazed.	Year.	Equivalent in Sheep of Live Stock grazed.
1861	15,656,000	1901	62,135,000
1871	34,831,000	1911	76,013,000
1881	60,559,000	1921*	66,159,000
1891	82,619,000	1922*	70,907,000

\* At 30th June, previous years at 31st December.

It is apparent, therefore, that the grazing of live stock has declined on the whole by about 15 per cent. between 1891 and 1922, and that the decline is attributable to a decrease in the number of sheep amounting to 40 per cent. in the period.

*Comparison—Live Stock in the Commonwealth.*

A comparison for 1921-22 of the number of horses, cattle, sheep, and swine in New South Wales and in the other States of the Commonwealth, is shown in the following table. The figures for New South Wales and South Australia are as at 30th June, 1922, for Victoria and Tasmania as at 1st March, 1922, and the others are as at 31st December, 1921.

State.	Horses.	Cattle.	Sheep.	Swine.
New South Wales ... ..	669,800	3,546,530	37,177,402	383,669
Victoria ... ..	496,124	1,750,369	12,325,818	230,770
Queensland ... ..	747,543	7,047,370	18,402,399	145,083
South Australia ... ..	267,639	419,197	6,257,052	87,667
Northern Territory ... ..	39,565	656,803	6,349	452
Western Australia ... ..	180,334	893,108	6,506,177	63,001
Tasmania ... ..	38,439	216,704	1,551,273	49,743
Australia ... ..	2,439,444	14,530,081	82,226,470	960,385

The above table shows that New South Wales contains the largest proportion in the Commonwealth of sheep, 45 per cent., and swine, 40 per cent.; whilst in Queensland there are 30·6 per cent. of the horses and 48·5 per cent. of the cattle.

*Distribution of Live Stock.*

In order to indicate the parts of New South Wales in which the flocks and herds predominate, the following table has been prepared, showing the number of live stock and the number per square mile in each Division at intervals since 1891:—

Division.	Number of Live Stock (000 omitted).					Number per square mile.				
	1891.	1901.	1911.	1921.	1922.	1891.	1901.	1911.	1921.	1922.
<b>SHEEP—</b>										
Coastal Belt ...	1,483	1,097	1,433	940	971	42.5	31.4	41.0	26.9	27.8
Tableland ...	7,882	8,859	8,961	6,747	7,319	195.3	219.5	220.0	167.2	181.3
Western Slopes ...	10,869	11,072	11,199	8,737	9,156	286.8	808.0	295.5	280.6	251.1
C'I Plains & Riverina ...	25,194	14,706	16,048	12,886	14,594	351.8	205.4	224.1	180.0	203.8
Western Plains ...	16,403	5,523	7,306	4,542	5,137	130.6	44.0	58.2	36.2	40.9
Whole State ...	61,831	41,857	44,947	33,852	37,177	199.2	134.9	144.8	109.1	119.8
<b>CATTLE, DAIRYING—</b>										
Coastal Belt ...	197	284	653	674	708	5.6	8.1	18.7	19.3	20.3
Tableland ...	67	70	107	73	77	1.7	1.7	2.7	1.8	1.9
Western Slopes ...	37	40	78	59	61	1.0	1.1	2.1	1.6	1.6
C'I Plains & Riverina ...	35	20	48	36	35	0.5	0.3	0.7	0.5	0.5
Western Plains ...	7	4	9	2	3	0.1	0.0	0.1	0.0	0.0
Whole State ...	343*	418*	895	844	884	1.1	1.3	2.9	2.7	2.8
<b>CATTLE, OTHER—</b>										
Coastal Belt ...	640	667	915	1,009	1,004	18.3	19.1	26.2	28.6	28.7
Tableland ...	465	501	550	580	622	11.5	12.4	13.6	14.4	15.4
Western Slopes ...	247	306	422	441	480	6.5	8.1	11.1	11.6	12.7
C'I Plains & Riverina ...	339	115	302	369	413	4.7	1.6	4.2	5.2	5.8
Western Plains ...	94	41	110	132	144	0.7	0.3	0.9	1.1	1.1
Whole State ...	1,785	1,630	2,299	2,531	2,663	5.8	5.3	7.4	8.2	8.6
<b>HORSES—</b>										
Coastal Belt ...	163	161	207	203	201	4.7	4.6	5.9	5.8	5.8
Tableland ...	92	112	127	112	113	2.3	2.8	3.1	2.8	2.8
Western Slopes ...	76	111	180	168	170	2.0	2.9	4.8	4.4	4.4
C'I Plains & Riverina ...	95	78	140	152	157	1.3	1.1	2.0	2.1	2.2
Western Plains ...	44	25	35	28	29	0.4	0.2	0.3	0.2	0.2
Whole State ...	470	487	689	663	670	1.5	1.6	2.2	2.1	2.2

\* Cows in milk only; dry cows and springing heifers are included in the total of Other Cattle.

The table indicates also the distribution of live stock. Sheep are depastured principally in the hinterland of the State, and are densest in the Western Slopes Division. Dairying cattle and, in fact, all cattle are most numerous in the coastal areas, though considerable numbers exist on the tablelands. Horses, too, are most numerous in the coastal belt, probably because farming needs are greatest there, and because of their accumulation in Sydney and other populous centres. The table, moreover, affords interesting particulars as to the localities most susceptible to losses of sheep through drought. The greatest decline since 1891 has been on the Central Plains and Riverina, where the numbers have fallen from 352 to 204 per square mile, and the greatest relative decline on the Western Plains, where the falling-off has been from 131 to 41 per square mile.

Particulars regarding the distribution of the live stock in accordance with the size of the holdings on which they were depastured as at 30th June, 1922, are shown in the following statement; the classification of the holdings is based on the area of alienated land only, but in calculating the number of stock per acre the area of Crown lands attached to alienated holdings has been taken into consideration. The holdings classified as "Crown lands only" are those leased from the Crown and not attached to alienated holdings,

and the figures under the category "Live Stock only" relate to live stock depastured on commons or on areas less than 1 acre in extent :—

Area Series (Alienated Holdings).	No. of Holdings	Number at 30th June, 1922.			Per 100 Acres (Alienated and Crown Lands).			Per cent. of Total.		
		Sheep.	Cattle.	Horses.	Sheep.	Cattle.	Horses.	Sheep.	Cattle.	Horses.
1 to 30 ...	10,152	55,603	47,614	22,097	9.5	8.1	3.8	0.1	1.3	3.3
31 to 400 ...	35,212	1,862,467	1,152,211	180,109	10.5	6.5	1.0	5.0	32.5	26.9
401 to 1,000 ...	15,086	4,411,490	645,544	149,796	16.8	2.5	0.6	11.9	18.2	22.4
1,001 to 10,000 ...	10,891	16,531,656	1,007,378	162,804	25.0	1.5	0.2	44.5	28.4	24.3
10,001 and over ...	794	11,064,504	438,691	38,896	34.2	1.4	0.1	29.8	12.4	5.8
Crown lands only ...	7,083	3,217,455	196,865	45,839	11.0	0.7	0.2	8.6	5.6	6.8
Live stock* ...	...	34,227	58,227	70,259	...	...	...	0.1	1.6	10.5
Totals ...	79,218	37,177,402	3,546,530	669,800	21.6	2.1	0.4	100.0	100.0	100.0

\* Not on agricultural and pastoral holdings.

The sheep on holdings, of which the alienated area did not exceed 1,000 acres represented only 17 per cent. of the total sheep in the State, and 75 per cent. were on holdings over 10,000 acres. Fifty-two per cent. of the cattle were on holdings not exceeding 1,000 acres; the majority of the dairy herds are in the coastal belt where the holdings are comparatively small, the cattle on the larger areas of the hinterland being used mainly for beef. Nearly half the horses are on holdings from 31 to 1,000 acres in extent, and the proportion on the very small or very large areas is comparatively low. More than 70,000 horses, or about 10.5 per cent. of the total, are used for haulage and other purposes not connected with farming pursuits.

The number of sheep per 100 acres increases with the size of the holdings. This is probably due in part to the extent of mixed farming on the smaller holdings. In the largest area group there are only 34.2 sheep per 100 acres, the general average for the State being less than 1 sheep to 5 acres. In regard to the cattle and horses the number per 100 acres decreases as the area of the holdings increases, the general average being 1 head of cattle to 50 acres, and 1 horse to 250 acres. Live stock were depastured on 36,872 holdings on which there was no cultivation on a commercial scale, but there were 11,468 cultivated holdings without an appreciable number of live stock thereon.

#### SHEEP.

A brief review of the rise of sheep-breeding in New South Wales is published on page 771 of the Year Book for 1921.

The following table shows the number of sheep at the close of each quinquennial period from 1861 to 1901, and illustrates the vicissitudes of sheep-breeding in New South Wales in the past twenty years :—

Year.	Sheep.	Average Annual Rate of Increase.	Year.	Sheep.	Average Annual Rate of Increase.	Year.	Sheep.	Average Annual Rate of Increase.
1861	5,615,054	...	1903	28,656,501	7.5	1913	39,850,223	2.1
1866	11,562,155	15.5	1904	34,526,894	20.5	1915*	33,009,038	(—) 11.8
1871	16,278,697	7.1	1905	39,506,764	14.4	1916*	32,600,729	(—) 1.2
1876	25,269,755	9.2	1906	44,132,421	11.7	1917*	36,196,383	11.0
1881	36,591,946	7.7	1907	44,461,839	0.7	1918*	38,621,196	6.5
1886	39,169,304	1.4	1908	43,370,797	(—) 2.5	1919*	37,381,874	(—) 3.2
1891	61,831,416	9.6	1909	46,202,578	6.5	1920*	29,249,253	(—) 21.8
1896	48,318,790	(—) 4.8	1910	45,560,969	(—) 1.4	1921*	33,851,828	15.7
1901	41,857,099	(—) 2.8	1911	44,947,287	(—) 1.3	1922*	37,177,402	9.8
1902	26,649,424	(—) 36.4	1912	39,044,502	(—) 13.1			

\* At 30th June. (—) Denotes decrease.

The flocks, which had decreased heavily during the fifties, grew at a remarkable rate after 1861, and a virtual boom in sheep-breeding prevailed for thirty years, despite the fact that wool values gradually declined between 1874 and 1894.

Although heavy decreases in the number of sheep in the State occurred in the years 1877 and 1884, these losses were regained quickly, and an otherwise almost unbroken series of increases continued each year until the remarkable total of nearly sixty-two millions was reached in 1891. These years present a marked contrast to the years which followed, when the rabbit pest had become so general as to aggravate the effects of dry weather through destruction of natural herbage.

Another important factor was the rise after 1900 of an export trade in canned and frozen mutton, which competed with the raising of sheep for wool. The growth of the agricultural industry also caused land to be diverted from the purpose of sheep breeding.

Although each of the factors mentioned doubtless contributed to the reduction in the numbers of sheep, the main cause would seem to be a remarkable deterioration of seasons due to diminished rainfall in the present century. This may be illustrated briefly by stating that the weighted average rainfall of the State was about  $3\frac{1}{2}$  inches less in the twenty years which followed 1894 than in the preceding quarter of a century, and that this decline was proportionally heaviest in the plain districts of low average rainfall, which in 1891 carried two-thirds of the sheep depastured in the State.

The sudden transition from very good to very bad seasons which occurred in the early nineties wrought such havoc among the flocks depastured on the immense western plains that by 1901 there had been a decrease from 16,400,000 to 5,500,000 sheep in the plains of the Western Division, and from 25,200,000 to 14,700,000 in the plains of the Central Division (see page 611), and in 1902 these flocks were further reduced by 1,900,000 and 7,600,000 respectively. Although the losses of 1902 were speedily regained, the general deterioration of subsequent seasons on the plains has been such that the flocks have not permanently exceeded the reduced numbers of 1901.

The extent of the diminution in the average rainfall approached 30 per cent. of the previous average on the plains of the Western Division, and 20 per cent. on the plains of the Central Division. Since the rainfall in the far West before 1894 was already so low as to render pastoral occupation precarious, it now became inadequate except for the sparsest occupation. Indeed after the drought of 1918-20 there were only 33,000 sheep in nine counties covering 15,000,000 acres of land in the north-western corner of the State.

The following statement shows the extent to which the flocks were affected by the various causes of increase and decrease during the last five seasons; the figures are approximate only:—

Year.	Lambs Marked during Year.	Sheep and Lambs slaughtered during Year.	Estimated No. of Deaths due to Seasonal and other Causes.	Net Import (+) or Export (-).*	Net Increase (+) or Decrease (-).	Sheep at 30th June.
	000	000	000	000	000	000
1917-18	9,262	3,202	3,403	(-) 232	(+) 2,425	38,621
1918-19	7,812	4,275	3,732	(-) 1,044	(-) 1,239	37,382
1919-20	4,532	5,537	5,751	(-) 1,377	(-) 8,133	29,249
1920-21	7,907	3,851	1,437	(+) 1,984	(+) 4,603	33,852
1921-22	9,881	5,230	1,479	(+) 153	(+) 3,325	37,177

\* Principally overland.

The effect of adverse seasons on the sheep flocks is apparent in four directions, viz., losses by death attributable mainly to lack of fodder and water, increase in the slaughtering of fat stock, decrease in lambing, and increased export to other States. The deaths due to seasonal conditions, disease, and other causes during the period were on the average about 9 per cent. per annum, the sheep and lambs slaughtered about 12 per cent. per annum, while export and import varied irregularly according to the season, leaving a slight net export; the average annual number of lambs marked was 22 per cent. of the total flock. The greatest gross reduction of sheep flocks in any season was 14,130,000 in 1919-20, converted by lambing and importation to a net reduction of 8,133,000. Reference to the extent of slaughtering is made on page 630.

### *Interstate Movement of Sheep.*

Apart from the seasonal movement of stock to and from agistment in other States, there appears to be a regular export of live stock from New South Wales to Victoria, and a corresponding import from Queensland to New South Wales borderwise. The interchange across the border with South Australia and with other States and countries by sea is very small. During the past five years 7,134,000 sheep have been moved from New South Wales to Victoria, and 3,576,000 from Victoria to New South Wales, leaving a net export to Victoria of 3,558,000; in the same period 5,019,000 sheep have been imported from Queensland to New South Wales, and 1,308,000 have been exported from New South Wales to Queensland, leaving a net import of 3,711,000 to New South Wales from Queensland. The net export to other destinations during the same period was 669,000, chiefly to South Australia, and the total net export of live sheep from New South Wales for the period 516,000. It is apparent that large numbers of sheep are sent from Queensland across New South Wales to Victoria, and small numbers to South Australia, or that pastoralists in New South Wales sell to Victorian and South Australian buyers and replenish their flocks from Queensland. In addition, it is apparent from the yearly movement that graziers in New South Wales made good part of their losses in the 1919-20 drought by large purchases in Queensland.

The following table shows the movement of sheep from and to New South Wales, so far as is recorded, in each of the past five seasons :—

Year.	Sheep from New South Wales.				Sheep to New South Wales.				Net Import (+) or Export (-).
	To Victoria.	To Queensland.	To South Australia and by Sea.	Total.	From Victoria.	From Queensland.	From South Australia and by Sea.	Total.	
	000	000	000	000	000	000	000	000	000
1917-18	1,160	121	135	1,416	738	418	28	1,184	(-) 232
1918-19	1,452	509	*	*	672	495	*	*	(-) 1,044
1919-20	2,289	335	218	2,842	689	750	26	1,465	(-) 1,377
1920-21	850	97	125	1,072	936	2,050	70	3,056	(+) 1,984
1921-22	1,383	245	108	1,736	541	1,306	42	1,889	(+) 153

\* Not available.



*Lambing.*

The greater part of the lambing of the State takes place during the autumn and winter months, although considerable proportions of ewes, varying according to the nature of the season, are reserved for spring and summer lambing. It is possible to breed from ewes twice per year, but it is not considered good policy and is rarely practised, except, perhaps, after severe losses. Seasonal changes play a large part in determining the proportion of ewes mated and of resultant lambs, and thus cause wide variations in the natural increase. Particulars of lambing in the past five years are shown below :—

Year.	Ewes at beginning of Year.	Ewes Mated during Year.	Lambs Marked during Year.	Lambs (under 1 year) surviving at end of Year (30th June).	Proportion of Lambs Marked to Ewes Mated.
000 omitted.					
					per cent.
1917-18 ... ..	19,091	16,494	9,262	8,312	56.1
1918-19 ... ..	20,711	15,537	7,812	6,951	50.3
1919-20 ... ..	19,984	11,931	4,532	3,808	38.0
1920-21 ... ..	16,776	14,196	7,907	7,084	55.7
1921-22 ... ..	17,620	15,452	9,881	8,824	63.9

The difference between the numbers of lambs marked and lambs surviving at the end of the year is accounted for largely by slaughtering—varying proportions ranging from one-third to two-thirds of the difference being so disposed of.

The season 1918-19 was bad, and severe drought conditions prevailed throughout 1919-20. Not only was the number of ewes mated heavily reduced, but the proportion of lambs marked to ewes mated fell as low as 38 per cent. This experience was in marked contrast with that of 1921-22, when abundant rains were received throughout the pastoral areas in the first half of the season. A report is issued annually in August upon the season's lambing. In 1923 it was estimated that as a result of the autumn and winter lambings, probably 4,827,000 lambs would be marked, or 44 per cent. of the number of ewes mated. The corresponding figures for 1922 were 7,453,000 lambs, or 65 per cent. of the number of ewes mated. Prospects of the spring lambing were considered good as a result of beneficial rains.

The following table shows the relative extent of lambing and slaughtering in quinquennial periods during the last thirty years :—

Period.	No. of Lambs Marked.	No. of Sheep and Lambs Slaughtered.	Proportion of Slaughtering to Lambing.
			per cent.
1892-1896 ... ..	50,758,000	34,880,000	68.7
1897-1901 ... ..	41,830,000	25,130,000	57.8
1902-1906 ... ..	44,314,000	19,737,000	44.5
1907-1911 ... ..	50,743,000	30,845,000	67.8
1912-1916-17 ...	39,282,000	26,172,000	66.6
1917-18-1921-22 ...	39,395,000	22,095,000	56.1

The fluctuations in lambing are very marked, the diminution during the past ten seasons being particularly noteworthy. Slaughtering is the principal factor affecting natural increase, but a heavy decline is apparent of late years. Losses from seasonal and other causes appear to have increased markedly and to have contributed very much to the reduction in the number of sheep during the past five seasons.

### *Size of Flocks.*

The decrease in the total number of sheep after 1891 was naturally accompanied by great changes in the size of individual flocks, partly as a result of losses and partly owing to the tendency among pastoralists to restrict their flocks to sizes where the risk of loss from drought was not so great. At the same time the large increase which occurred in the number of flocks took place principally among the small flocks. These changes may be traced in the following table, which gives an approximate classification of the flocks for various years, from 1891 to 1922—

Size of Flocks.	Number of Flocks.				Number of Sheep.			
	1891.	1911.	1921.†	1922†.	1891.	1911.	1921.†	1922†.
1—1,000 ...	7,606	17,773	19,905	19,187	2,794,751	5,252,546	5,983,607	6,096,495
1,001—2,000 ...	1,954	3,510	3,459	3,672	2,979,168	5,149,618	4,882,170	5,160,873
2,001—5,000 ...	1,696	2,735	2,310	2,640	5,493,942	8,554,299	7,083,742	7,988,984
5,001—10,000 ...	686	847	722	819	4,943,221	5,977,233	4,955,413	5,631,580
10,001—20,000 ...	495	507	349	373	7,056,580	7,143,273	4,850,005	5,206,544
20,001—50,000 ...	491	296	149	173	15,553,774	8,737,927	4,185,143	5,023,943
50,001—100,000 ...	186	53	26	29	12,617,206	3,434,698	1,688,675	1,921,805
100,001 and over ...	73	6	2	1	10,392,774	697,693	223,073	147,178
Total ...	13,187	25,727	26,922	26,894	61,831,416	44,947,287	33,851,828	37,177,402

† 30th June.

In 1891 there were only 13,187 holdings carrying sheep, but at 30th June, 1922 they numbered 26,894, although the sheep had decreased in numbers by nearly 24 millions. This development may be attributed largely to the combination of pastoral with agricultural pursuits; but the total number of rural holdings increased from 53,557 in 1891 to 80,065 in 1921.

It is significant that while in 1891 there were 73 holdings which each carried over 100,000 sheep, the number of such in 1901 was 12, and in 1922 only 1. The sheep in flocks of over 20,000 comprised 62 per cent. of the total in 1891, but only 19.1 per cent. in 1922; while in 1891 the flocks under 2,000 comprised 9.3 per cent. of the total sheep compared with 30.3 per cent. in 1922. The greatest change has occurred since 1894, when a very large number of sheep perished, and pastoralists realised that one of the best methods of meeting seasons of drought lay in the subdivision of their large flocks. The closer settlement policy pursued since 1904 has led to some further subdivision of flocks but the area subdivided has been less than 2,500,000 acres.

Part of the cause, and perhaps part of the effect of this change, has been a steady increase in the number of holdings and the gradual disappearance of unwieldy pastoral areas, over 100,000 acres in extent, whereon, formerly, sheep were left to roam with little attention, because of the dearth of labour and of the vast unpeopled spaces which existed in the earlier years.

A comparison over a period of ten years shows that this movement is progressing steadily. In this table the holdings are classified according to the total area of alienated and Crown lands, therefore they differ from those in an earlier table in which the area groups relate to the alienated land only.

Area Groups. (Alienated and Crown Lands.)				Number of Flocks.		Number of Sheep.		Proportion to total Flock.		Proportion to total Sheep.	
				1912.	1922.	1912.	1922.	1912.	1922.	1912.	1922.
	Acres.							per cent.	per cent.	per cent.	per cent.
1 and under	51	...	...	969	453	23,184	18,662	3·8	1·7	0·1	0·1
51	101	...	...	714	577	34,583	36,144	2·8	2·2	0·1	0·1
101	501	...	...	5,644	5,736	754,414	1,059,417	22·1	21·3	1·9	2·8
501	1,001	...	...	5,218	6,243	1,710,296	2,285,957	20·4	23·2	4·4	6·1
1,001	5,001	...	...	9,211	10,140	9,912,066	11,191,209	36·1	37·7	25·4	30·1
5,001	10,001	...	...	1,605	1,759	5,217,447	5,521,765	6·3	6·5	13·3	14·8
10,001	20,001	...	...	762	898	4,447,589	4,754,889	3·0	3·3	11·4	12·8
20,001	50,001	...	...	569	611	6,353,918	4,907,479	2·2	2·3	16·3	13·2
50,001	100,001	...	...	183	188	3,634,504	2,711,115	0·7	0·7	9·3	7·3
100,001 and upwards	...	...	...	230	187	6,774,112	4,679,971	0·9	0·7	17·3	12·6
Ill-defined areas	...	...	...	444	102	182,389	10,794	1·7	0·4	0·5	0·1
Total	...	...	...	25,549	26,894	39,044,502	37,177,402	100·0	100·0	100·0	100·0

The number of holdings of each area group between 100 acres and 100,000 acres carrying sheep have increased, but the increase in numbers has been most marked in the area groups from 500 acres to 5,000 acres.

In 1912, 42·9 per cent. of the sheep were depastured on holdings of 20,001 acres and upwards, whilst in 1922 only 33·1 per cent. were so depastured. The holdings up to 20,000 acres carried 66·9 per cent. of the total number of sheep in 1922, having increased from 57·1 per cent. in 1912.

#### *Breeds of Sheep.*

The principal breed of sheep in New South Wales is the celebrated short-woolled merino strain. Crosses of long-woolled breeds, mainly with the merino, are numerous and important, but the numbers of other breeds are small. English long-woolled sheep are represented chiefly by the Lincoln, Romney Marsh and Border Leicester breeds, while Suffolk and Dorset Horn sheep have been introduced for the raising of early-maturing lambs.

Linolns, and their crosses with merinos, constitute the largest proportionate number of coarse-woolled varieties. The proportion of English and cross-bred sheep has increased considerably during recent years. In 1891 the ratio of coarse-woolled and cross-bred sheep to the total was 3 per cent.,

but with the development of mixed farming and the meat export trade, it advanced to 29 per cent. in 1920, but dropped on account of the more favourable market for merino wool.

The following table shows the approximate number and proportion of merino and other sheep in the State during the past forty years :—

At 31st December.	Merino.	Other.	Total.	Per cent. of Total.	
				Merino.	Other.
1881 ... ..	34,412,900	2,179,000	36,591,900	94	6
1891 ... ..	60,252,400	1,579,000	61,831,400	97	3
1901 ... ..	38,886,000	2,971,000	41,857,000	93	7
1911 ... ..	37,047,400	6,283,900	43,331,300*	85	15
1918 ... ..	26,786,100	12,233,800	39,018,900*	69	31
1919 ... ..	23,170,100	10,295,400	33,465,500*	69	31
1920 ... ..	21,987,000	8,909,800	30,896,800*	71	29
1921 ... ..	25,994,700	8,771,400	34,766,100*	75	25

\* Sheep on holdings with live-stock equivalent of more than 100 sheep.

### *Sheep Breeding.*

The increased attention paid to cross-breeding in order to supply the demands of the frozen-mutton trade, and the increase in the number of settlers on small and moderate-sized holdings who combine grazing with agriculture, have together emphasised the necessity of conducting scientific experiments in the matter of breeding, and of providing instruction for sheep-farmers. To meet this necessity a sheep and wool expert of the Department of Agriculture organises the class work conducted at State experiment farms, delivering lectures and giving demonstrations in country centres, besides issuing pamphlets containing the results of experiments and conveying general information on breeding matters to farmers.

Cross-breeding experiments on a comprehensive scale were commenced in 1910 at the Wagga Wagga, Cowra, Bathurst, and Glen Innes Experiment Farms, the work being carried out specially in the interests of the farmer or small grazier, who has the facilities for breeding lambs for market. Both the long and the short woolled breeds were crossed with the merino, with the object of obtaining the most desirable characteristics of each group, so that all these qualities could be incorporated in a single strain. The final results of the investigations form the subject of a special "Farmer's Bulletin," issued by the Department of Agriculture in August, 1920, and the conclusion arrived at favoured the mating of merino ewes with sires of British breeds, in view of the adaptableness of the former to seasonal conditions.

Further experiments were made in 1922 by mating first-cross Border Leicester x Merino and Lincoln x Merino ewes with rams of the South Down, Dorset Horn and Ryeland breeds. Of the resulting lambs, those of Dorset Horn sires were rather heavier and brought higher prices than those of the Ryeland, and much more so than those of South Down sires.

### *World's Sheep Flocks.*

Amongst the sheep flocks of the world, those of Australia constitute an important proportion, especially as a large part of the production is available for export. New South Wales is by far the largest sheep-raising State in the Commonwealth. A comparison of the sheep flocks of the world is made

below, and some indication is given of the expansion or decline in each continent in recent years. The information is taken from the first Year Book of the International Institute of Agriculture :—

Continent.	No. of Sheep at the dates nearest to—		Increase (+) or Decrease (—).
	1911.	1921.	
	No.	No.	per cent.
Europe ... ..	167,072,000	153,310,000	(—) 8·24
Asia ... ..	100,100,000	97,414,000	(—) 2·68
Africa ... ..	60,240,000	61,600,000	(+) 2·26
America, North and Central ... ..	57,544,000	42,735,000	(—) 34·65
America, South ... ..	115,774,000	78,240,000	(—) 32·42
Oceania—			
Australia ... ..	93,003,000	75,554,000	(—) 18·76
New Zealand ... ..	23,996,000	23,285,000	(—) 2·96
Other ... ..	86,000	50,000	(—) 41·99
Total, the World ... ..	617,815,000	532,188,000	(—) 13·86

It is apparent that in recent years there has been a serious decline in the number of sheep in the leading producing countries, and that the increases shown, *e.g.*, in Africa, do not go very far towards counterbalancing the diminution in the world's flocks.

#### WOOL.

The prosperity of New South Wales for many years has depended very largely on its sheep flocks and upon the condition of the wool markets of the world. Although the proportion of the value of wool exported to the total value of exports declined from 61 per cent. in the period 1880–89, to 32 per cent. between 1910 and 1919, the value of the wool-clip is still the most important factor of the year in the primary production of the State.

The introduction and careful improvement of high strains of wool-bearing sheep in the early years of the colony did not lead at once to any large export trade in wool. The rise of the great and flourishing wool trade had a small beginning, and many difficulties were experienced before it became established. It is probable that the first wool exported was a small parcel of 245 lb. in 1807. The following table shows with what rapid strides the industry advanced in New South Wales from the year 1821 :—

Year.	Wool Exported.		Year.	Wool Produced.	
	Quantity.†	Value.		Quantity.‡	Value.
	lb.	£		lb.	£
1821	178,000	*	1881	161,676,000	7,187,200
1831	1,401,300	75,980	1891	375,600,000	11,059,300
1841	8,611,000	517,540	1901	310,075,000	9,072,100
1851	32,362,000	828,300	1911	371,546,000	13,264,000
1861	18,171,000	1,396,400	1921†	240,231,000	13,763,000
1871	65,612,000	4,748,200	1922†	285,418,000	15,329,000

\*Not available.

†Year ended 30 June.

‡As in the grease.

The decline during the fifties was due to the neglect of the pastoral industry occasioned by the gold rushes. This decline, however, was not so great as would appear from the above figures, because in 1851 and previous years the exports of the districts, which afterwards became Victoria and Queensland, are included. The development in recent years has been due to the rapidly expanding market for wool to supply raw material for the great textile industry. The decline in production since 1891 has been concurrent with the diminution in the number of sheep, although this has been offset in some measure by increased production of wool per sheep. The value of output has actually increased under the influence of a marked rise in prices.

### *Prices of Wool.*

On account of the very large number of varieties of wool and of the changing proportions of each in the total output, it is a matter of great difficulty to obtain price quotations which will show accurately the fluctuations of values from year to year.

However, it appears that the average values of Australian wool per pound have been subject to alternate periods of rising and falling which, on the basis of average export values from New South Wales has been as follows:—Rising to 1830, falling 1831 to 1849, rising 1850 to 1861, falling 1862 to 1894, rising 1895 to 1907, falling 1908 to 1911, rising since 1912. These periods indicate the general trend only because in certain years, notably 1900, 1914–15, 1921 and the 1922, prices varied irregularly.

The following statement, compiled from the official records of the Sydney Wool Selling Brokers' Association, shows the average prices realised for wool at Sydney auctions in the past twenty-five selling seasons:—

Season ended 30th June.	Average Prices per lb.		Season ended 30th June.	Average Prices per lb.		Season ended 30th June.	Average Prices per lb.	
	Greasy.	Scoured.		Greasy.	Scoured.		Greasy.	Scoured.
1899	d. 7½	d. 13½	1908	d. 9	d. 15½	1917	d. 14½	d. 20½
1900	11½	18½	1909	7½	13½	1918	14½	23½
1901	5½	10½	1910	9½	15½	1919	15	25½
1902	6½	11½	1911	8½	14½	1920	15½	26½
1903	8	14½	1912	8½	14	1921	12½	25
1904	8½	14½	1913	9½	16½	1922	12½	14½
1905	8½	14½	1914	9½	16½	1923	15½	23
1906	9	16½	1915	8½	15½			
1907	9½	15½	1916	10½	17½			

These figures represent the average price of wool sold during the year, and are not comparable with those previously published in this part, representing the average value of wool as declared for Customs purposes on export.

A comparison of the average prices of wool on a basis of greasy wool is not entirely satisfactory, as the market price of the clip in any season is affected by the proportion of natural grease which the wool contains, as well as by the proportion of merino to cross-bred and of fleece to lambs' wool sold, and by such variable qualities as length, fineness, and soundness. The quantity of grease varies according to the seasonal conditions, as wool grown in a good season carries more grease than in a dry period. The feeding of sheep on rich rations for the purposes of obtaining a weighty carcase for export also causes an increase in the proportion of grease in the wool.

*Production of Wool.*

Wool is produced in New South Wales principally by shearing the live sheep, but also to a considerable extent by fellmongering—removing wool from skins of sheep slaughtered, and by picking the wool from the carcasses of dead sheep on the holding.

Formerly considerable numbers of sheep were washed before being shorn, and, as particulars of the resultant wool were not recorded prior to 1876, only estimates of the quantity of wool produced up to that date are available. The output of wool is generally stated as in the grease, the equivalent being variable but approximating to 1 lb. of washed to 2 lb. of greasy wool.

The following table shows, in quinquennial periods since 1876 and annually during the past ten seasons, the total quantity of wool produced (as in the grease) in New South Wales, together with the aggregate value on f.o.b. basis Sydney, and the value to growers in the past ten seasons :—

Period.	Wool Produced (000 omitted).		Year.	Wool produced (000 omitted).		
	Quantity as in the Grease.	Value F.O.B. Sydney.		Quantity as in the Grease.	Value F.O.B. Sydney.	Value at place of Production.
	lb.	£		lb.	£	£
1876-1880	718,397	31,298	1912	326,804	12,823	12,497
1881-1885	943,814	40,563	1913	357,985	14,337	13,620
1886-1890	1,294,781	44,773	1914-15	318,935	12,228	11,250
1891-1895	1,813,630	49,025	1915-16	262,045	12,291	11,380
1896-1900	1,408,240	42,984	1916-17	270,525	17,750	16,435
1901-1905	1,302,585	46,719	1917-18	284,188	19,538	18,091
1906-1910	1,817,162	73,610	1918-19	305,613	20,374	18,865
1911-1915*	1,507,080	57,956	1919-20	296,641	19,776	18,311
1916-1920†	1,419,012	89,729	1920-21	240,231	13,763	12,744
			1921-22	285,418	15,329	14,194

\*  $4\frac{1}{2}$  years ended 30th June, 1915.

† 5 years ended 30th June, 1920.

The values shown in this table illustrate the great importance of the high prices realised during the period 1916-1920, the total value of wool being more than twice as great as in the corresponding period, thirty years earlier, when the quantity produced was only 9 per cent. less.

The following statement shows particulars of the number of sheep shorn, the average weight of wool per sheep, and the respective amounts of shorn and other wool produced in each of the past ten years :—

Year.	Sheep and Lambs Shorn.	Wool from Sheep and Lambs Shorn (as in the grease).		Other Wool.*	Total Production of Wool.
		Quantity.	Average weight of Fleece (Sheep and Lambs).		
	No.	lb.	lb.	lb.	lb.
1912	38,417,000	267,674,000	6·97	59,130,000	326,804,000
1913	37,903,000	300,721,000	7·93	57,264,000	357,985,000
1914-15	37,300,000	268,476,000	7·20	50,459,000	318,935,000
1915-16	30,904,000	219,234,000	7·09	42,811,000	262,045,000
1916-17	32,075,000	237,112,000	7·39	33,413,000	270,525,000
1917-18	35,559,000	251,652,000	7·08	32,536,000	284,188,000
1918-19	36,960,000	263,585,000	7·13	42,028,000	305,613,000
1919-20	34,468,000	242,274,000	7·03	54,367,000	296,641,000
1920-21	29,327,000	203,140,000	6·93	37,091,000	240,231,000
1921-22	32,981,000	247,162,000	7·49	38,256,000	285,418,000

\* Estimated quantity of dead wool and skin wool.

The quantities of skin wool and dead wool produced fluctuate according to slaughtering, and the mortality from other causes. Both are usually high in adverse seasons, *e.g.*, 1914-15 and 1919-20, but favourable market conditions led to heavy slaughtering in 1912 and 1913.

Shearing operations are usually carried out between June and November, and the average weight of the fleece apparently varies very greatly under the influence of the seasonal conditions ruling during the period in which the wool was grown. Thus the clip of 1920-21, shorn in the latter half of 1920, but grown during the worst period of drought experienced in recent years, was more than half a pound lighter per sheep than that shorn in the following season when bountiful rains had provided ample pasturage.

#### WOOL MARKETING.

Less than three per cent of the wool produced in New South Wales is manufactured within the State. Hence the great importance attaching to matters connected with marketing successive clips.

For many years the whole of the wool grown in New South Wales was shipped for sale in London. As the number of continental buyers increased, however, there developed a tendency, which harmonised entirely with Australian interests, to seek supplies of the raw material at their source.

#### Sydney Wool Sales.

Sydney wool sales began to assume importance about the year 1885, and at the time of the initiation of the Imperial Wool Purchase Scheme in November, 1916, about 85 per cent. of the successive wool clips of New South Wales was sold annually in Sydney to representatives of firms in practically every foreign country where woollen goods were manufactured on an extensive scale. Between November, 1916, and 30th June, 1920, all local wool was acquired by the Imperial Government by appraisement, and public wool sales were not resumed in Sydney until 5th October, 1920.

The following statement compiled from the records of the Sydney Wool Selling Brokers' Association, shows the absolute and relative magnitude of sales of wool in Sydney in the past ten seasons omitting from account those four (1916-17 to 1919-20) during which the appraisement system under the Imperial Purchase Scheme was in operation:—

Season.	Wool Sold.*		Proportion of Sales to—		Description of Wool Sold.					
	Weight.	Value.	Arrivals in Sydney.	Exports.	Breed.		Growth.		Condition.	
					Merino.	Cross-bred.	Fleece.	Lambs.	Greasy.	Scoured.
	lb.000	£000	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1912-13	216,533	9,065	93.2	86.5	91.3	8.7	97.4	2.6	89.8	10.2
1913-14	257,437	10,333	96.4	91.3	89.0	11.0	94.4	5.6	88.7	11.3
1914-15	182,106	6,739	69.3	75.0	83.8	16.2	95.4	4.6	92.0	8.0
1915-16	224,482	10,430	101.1	84.1	84.5	15.5	95.8	4.2	86.7	13.3
1920-21	102,810	5,740	54.4	55.7	89.1	10.9	98.9	1.1	93.2	6.8
1921-22	293,533	15,201	117.7	90.3	73.2	26.8	95.7	4.3	90.7	9.3
1922-23	256,113	19,159	108.3	87.8	79.0	21.0	94.3	5.7	93.3	6.7

\* Greasy and Scoured.

The figures as to quantity and value in this table are not comparable with any others quoted herein by reason of the fact that they are not on the basis of wool in the grease, and that the wool produced in any season is not necessarily sold in the same season. The uncertainty consequent on the outbreak of war caused a heavy decline in sales during 1914-15, and sales were again retarded on the resumption of auctions in 1920-21, owing to



the existence of large stocks and uncertain conditions. At the close of sales in June, 1923, there was practically no wool remaining unsold in Sydney.

Particulars of the Imperial Wool Purchase Scheme which operated during the years 1916-17 to 1919-20 were published in previous editions of this Year Book.

*British Australian Wool Realisation Association Limited.*

This Association was brought into being on 27th January, 1921, to dispose of a total surplus of 2,691,827 bales of Australian, New Zealand, and South African wool, which existed as a result of war-time operations.

Details of the formation and early activities of this organisation may be found in the Year Book for 1921, at page 781.

During 1921, B.A.W.R.A. disposed of 801,449 bales of wool of which 242,015 bales of Australian merino and 88,100 bales of Australian crossbred owned by B.A.W.R.A. realised £6,394,821, equal to £19 7s. 5d. per bale. In 1922, sales were again extensive and a total of 977,119 bales were disposed of including 172,855 bales of Australian merino and 137,316 bales of Australian crossbred owned by B.A.W.R.A., which gave a gross return of £7,185,198, equal to £23 3s. 4d. per bale.

The total payments by B.A.W.R.A. to shareholders during 1921 and 1922 amounted to £16,075,985, comprising approximately £10,000,000 for retirement of priority wool certificates and £6,000,000 in reduction of capital.

The balance sheet at 31st December, 1922, showed, among liabilities, issued capital £5,924,020, capital payable to shareholders (14th April, 1923) £5,924,020, surplus at 31st December, 1922, £1,210,865; and among assets, wool stocks, valued as at date of acquisition, £3,718,041; Government securities, £3,253,865; cash at bankers, £7,043,361.

At the beginning of 1923, the stocks of wool on hand for disposal amounted to 913,265 bales of which 36,899 bales of merino and 240,723 bales of crossbred were Australian wool, owned by B.A.W.R.A., the balance being principally Australian and New Zealand crossbred wools awaiting disposal on behalf of the British Government.

*Destination of Wool Shipped.*

The following statement shows the destination of the overseas shipments of wool from New South Wales during the two years ended June, 1921, and 1922, in comparison with similar information for the year 1913; the figures relate to the cargoes actually despatched during the periods specified, and not to the wool sold during each season :—

Destination.	Oversea Exports of Wool (000 omitted).								
	Greasy.			Scoured.			Tops.		
	1913.	1920-21.	1921-22.	1913.	1920-21.	1921-22.	1913.	1920-21.	1921-22.
United Kingdom ...	lb. 50,120	lb. 80,322	lb. 93,733	lb. 10,609	lb. 18,164	lb. 31,156	lb. 40	lb. 422	lb. 145
Canada ...	...	127	464	...	60	43	...	287	971
Austria ...	7,297	734	*257	33	293	*52	29	...	...
Belgium ...	27,222	12,144	23,106	2,021	3,362	5,725	...	...	...
France ...	76,486	19,203	73,587	12,658	974	7,816	...	...	...
Germany ...	54,266	5,174	17,737	4,579	185	2,016	...	...	...
Italy ...	3,638	6,243	18,201	132	12	292	...	...	...
Japan ...	5,661	6,179	27,501	129	70	561	3,435	2,406	2,548
Netherlands ...	...	722	125	...	6	...	...	...	...
Spain ...	...	2,755	327	...	23	121	...	761	...
United States ...	4,286	15,236	11,398	85	3,217	959	...	1,344	556
Other Countries ...	23	252	295	2	45	19	58	...	9
Total ...	228,999	149,091	266,821	30,248	26,411	48,760	3,562	5,280	4,229

\* Trieste.

During 1920-21 exports were retarded owing to the deranged condition of markets.

Since the termination of the Imperial wool purchase scheme the quantity of wool sent to the United Kingdom has decreased and a larger proportion has been sent direct to foreign countries, the increase being relatively greatest in respect of France, Japan, and America.

Approximately 75 per cent. of the wool is shipped in the greasy state, though the weight is thereby loaded with extraneous matter amounting to as much as the wool itself. It is considered that when wool is stored in tightly-packed bales for a long period it is more liable to deterioration if scoured. An important consideration is the purpose for which the wool is needed; for certain classes of factories scoured wool is purchased, and in other cases manufacturers prefer to buy greasy and to subject it to special processes in classing and scouring.

The quantity of New South Wales wool used locally and the proportion to the total production during each quinquennium since 1900 are shown below :—

Period.	Wool used Locally.		Proportion of Production Exported.
	Quantity.	Proportion to total Production.	
	lb.	per cent.	per cent.
1901-1905	5,467,000	·42	99·58
1906-1910	5,416,000	·30	99·70
1911-1915*	12,976,000	·86	99·14
1916-1920†	40,973,000	2·47	97·53

\* 4½ years ended 30th June.

† Years ended 30th June.

Although the development of local manufactories using wool has been very slow and is still limited, a pronounced expansion has taken place since 1911, and particularly during the war period.

#### CATTLE.

Cattle-raising, as connected with the dairying industry, is dealt with in later pages of this Year Book.

Other industries connected with cattle, such, for instance, as the export of beef, have never existed on a large scale in New South Wales. However, in recent years, an appreciable increase has been apparent in the number of cattle depastured, and the number existing in 1922 constituted a record for the State. Favoured by the rise of prices, the value of products derived from cattle increased rapidly during the war and subsequently until 1919-20; in the succeeding year the market weakened to such an extent that the value dropped by over 50 per cent. and was the lowest since 1914-15. The industry of raising cattle for the meat export trade is more responsive to fluctuations in the prices in overseas markets than in the case of the mutton trade; from sheep an annual yield of wool may be obtained, but cattle held for market are unprofitable. Particulars of the export trade in beef are shown on page 632.

The following table shows the total number of cattle in the State, including dairy cattle, at the close of each quinquennial period since 1861, and the numbers at 30th June of each of the last five years :—

Year.	Cattle.	Year.	Cattle.	Year.	Cattle.
1861	2,271,923	1891	2,128,838	1918*	3,161,717
1866	1,771,809	1896	2,226,163	1919*	3,280,676
1871	2,014,888	1901	2,047,454	1920*	3,084,332
1876	3,131,013	1906	2,549,944	1921*	3,375,267
1881	2,597,348	1911	3,194,236	1922*	3,546,530
1886	1,367,844	1916*	2,405,770		

\* At 30th June.

The principal distinct breeds of cattle now in the State are the Durham or Shorthorn, Hereford, Jersey, Ayrshire, and Devon, but crosses from these breeds predominate. The number of pure and stud cattle in the State probably does not exceed 250,000.

The following table contains particulars of the sexes and ages of the cattle in the State in the last five years :—

At 30th June.	Bulls, 3 years and over.	Dairy Cows and other Milking Cows.	Other Cows, not in milk, and Steers over 3 years.	Steers and Young Bulls (1 to 3 years).	Calves, under 1 year.	Total.
	No.	No.	No.	No.	No.	No.
1918	34,386	1,066,089	920,890	507,111	633,241	3,161,717
1919	37,105	970,448	1,104,824	562,432	605,867	3,280,676
1920	36,272	903,023	1,157,477	508,039	479,521	3,084,332
1921	40,439	941,742	1,328,788	527,569	536,729	3,375,267
1922	43,381	974,087	1,385,427*	529,933	613,702	3,546,530

\* Includes 709,787 steers 3 years and over, and 684,640 cows not in registered dairies.

At 30th June, 1922, there were, apart from calves, 1,274,101 bulls and steers, and 1,658,727 cows and heifers in the State, but similar information is not available for previous years. Further details regarding milking cows are published on page 643. The number of calves under one year shows considerable variation on account of seasonal influences, and the lowness of the number recorded on 30th June, 1920, may be attributed to the severe drought prevailing in 1919-20. During the past three seasons the numbers of calves dropped have been respectively 725,670, 813,665 and 995,128, and by comparison with the above table it is evident that only about two-thirds of these survive or are kept until the end of the year.

#### *Interstate Movements of Cattle.*

By reason of the existence of diseases among the cattle of certain districts, notably the presence of cattle tick in the north-east of New South Wales and in parts of Queensland, the interstate movement of cattle is closely regulated in order to stay the spread of disease. In certain cases cattle are quarantined, dipped or sprayed on admission and subject to special treatment should such become necessary within a fixed period thereafter.

The following statement shows the number of live cattle (so far as recorded) passing into and out of New South Wales during each of the past

five years. The movement is principally overland, comparatively few cattle being transported by sea.

Year.	From New South Wales.				To New South Wales.			
	To Victoria.	To Queensland.	To South Australia and by Sea.	Total.	From Victoria.	From Queensland.	From South Australia and by Sea.	Total.
1917-18	No. 111,587	No. 16,235	No. 7,528	No. 135,350	No. 96,105	No. 136,693	No. 3,976	No. 236,774
1918-19	109,036	53,749	11,233	174,018	56,604	67,179	2,153	125,936
1919-20	120,407	29,412	6,546	156,365	59,219	117,263	2,855	179,337
1920-21	100,508	19,240	6,976	126,724	142,958	375,597	4,780	523,335
1921-22	158,834	24,740	12,355	195,929	43,318	204,830	1,153	249,301

Although the effects of seasonal variations are apparent during this period there is, on the whole, a heavy but fluctuating import of cattle to New South Wales from Queensland, and a considerable export to Victoria. The interchange with South Australia is small. The large import to New South Wales in 1920-21 consisted principally of cattle for slaughtering purposes, as with the breaking of the drought in New South Wales in June 1920 cattle were withheld from market for fattening and breeding purposes.

During the five years covered in the table there was a net import of about 758,000 cattle from Queensland, and a net export of about 200,000 to Victoria, leaving a total net import to New South Wales from all sources of about 526,000.

#### *Increase and Decrease of Cattle.*

The number of cattle in New South Wales varies under the influence of three factors, viz., importation, slaughtering, and natural increase, *i.e.*, excess of calving over deaths from causes other than slaughtering. The operation of each of these during each of the past five years is shown below:—

Year.	Cattle at beginning of Year.	Net Imports of Cattle.	Cattle and Calves Slaughtered.	Cattle at end of Year.	Estimated Natural Increase.*
1917-18	2,765,943	101,424	378,123	3,161,717	672,473
1918-19	3,161,717	(—) 48,082	437,187	3,280,676	604,228
1919-20	3,280,676	22,972	593,997	3,084,332	374,681
1920-21	3,084,332	396,611	526,055	3,375,267	420,379
1921-22	3,375,267	53,372	631,789	3,546,530	749,680

(—) Denotes excess of exports. \* Excess of calves dropped over deaths other than by slaughtering.

Seasonal influences have a pronounced effect on imports, slaughtering, and natural increase. It will be observed that the natural increase in the bad season of 1919-20 was only about one-half as great as that of 1921-22. The net natural increase, as shown above, represents only the excess of the number of calves born during the year over the number of cattle of all kinds which died during the year other than by slaughtering. The number of calves born during and surviving at the end of each year is shown on a previous page.

## HORSES.

The number of horses in the State steadily increased to 1894; but the total had fallen considerably by 1901; since that year there has been a substantial increase, and the number at the end of 1911 reached 689,004. There was a great advance in horse-breeding between 1910 and 1918, owing to the increased demand which arose as a consequence of widening settlement, prosperous seasons, and, more recently, defence requirements.

The following table shows the number of horses in New South Wales at the end of quinquennial periods since 1861, and at 30th June in each of the last five years:—

Year.	Horses.	Year.	Horses.	Year.	Horses.
1861	233,220	1891	469,647	1918*	742,247
1866	274,437	1896	510,636	1919*	722,723
1871	304,100	1901	486,716	1920*	662,264
1876	366,703	1906	537,762	1921*	663,178
1881	398,577	1911	689,004	1922*	669,800
1886	361,663	1916*	719,542		

\* At 30th June.

The increase in the number of horses in the State since 1861 has been occasioned mainly by the growth of domestic needs. The fluctuations in the numbers are not very marked, but it is noteworthy that the droughts of 1902 and 1919-20 each caused a reduction in numbers of approximately 10 per cent.

For purposes of classification the horses have been divided into draught and light, and the number of each particular kind, at the 31st December, 1921, so far as could be ascertained from returns collected by the Stock Department, was as follows:—

Class.	Thoroughbred.	Ordinary.	Total.
Draught ...	26,170	226,820	252,990
Light ...	30,671	241,770	272,441
Total ...	56,841	468,590	525,431

The number of horses shown above represents only those on holdings which depasture ten or more horses or live stock equivalent to 100 or more sheep.

New South Wales is specially suited to the breeding of saddle and light harness stock, and it is doubtful whether, in these particular classes, the Australian horse can be surpassed anywhere. Thoroughbred sires are kept on many of the large holdings, and the progeny of these stallions combine speed with great powers of endurance. The possession of these qualities gives them great value as army remounts.

There is a small export trade to India, where the horses are required as remounts for the Indian Army; this trade has shown a marked increase since 1914. In the year ended 30th June, 1922, 321 horses, valued at £7,500, were exported to India.

*Interstate Movement of Horses.*

The movement of horses to and from New South Wales is not very extensive and is chiefly borderwise with other States. There is a regular import from Queensland, which increased considerably in 1920-21, apparently to replace losses of the previous year. There is normally a small export to Victoria, and in 1920-21 there was evidently a considerable interchange for agistment purposes. The net import of horses to New South Wales during the five years ended June, 1922, was approximately 31,000.

*Horse Breeding.*

It is apparent that horse-breeding in New South Wales has declined very markedly during the past five years owing, doubtless, to the effect of the adverse seasons of 1918-20, to the low prices prevailing, and probably to the increased vogue of motor transport.

During the three years between July, 1918, and June, 1921, approximately 93,000 foals were bred, while probably about 186,000 horses (including foals under 1 year) died. The number of foals dropped during normal years is, on the average, between 7 and 8 per stallion, but during 1918-19 and 1919-20 breeding was severely restricted, and the proportion of foals dropped in the succeeding seasons declined to about 5.

The following table shows the number of horses of each sex, and the number of foals at the end of each of the past five years:—

At 30th June.	Stallions.	Mares and Fillies.	Geldings and Colts.	Foals under 1 year.	Total.
1918	6,407	341,991	347,017	46,832	742,247
1919	5,587	330,540	346,581	40,015	722,723
1920	4,609	305,211	327,689	24,755	662,264
1921	4,270	314,073	324,770	20,065	663,178
1922	4,318	314,276	321,521	29,685	669,800

The pronounced decrease in the number of stallions during this period is reflected in the diminution of breeding operations. A Bill has been prepared to provide for certification and registration of stallions.

*OTHER LIVE STOCK.*

Particulars of the number of pigs in the State are shown on page 651.

The number of goats in New South Wales in June, 1922, was 36,190 including 3,868 Angora goats, which are valued by pastoralists chiefly as effective scrub exterminators, although the dry climate of the western districts is eminently suited to the production of fine mohair. Under the provisions of the Dog and Goat Act, 1898, the use of dogs or goats for purposes of draught is prohibited.

Camels are used as carriers on the Western Plains, the number in June, 1922, being 1,384, compared with 1,792 at the close of the year 1913.

Donkeys and mules are not extensively used in New South Wales, the numbers in 1922 being 60 of the former and 137 of the latter. It is claimed that mules have many points of advantage over horses for farm work, especially in areas of limited rainfall—for instance, longer period of utility, smaller cost of maintenance, greater adaptability to untoward conditions of labour, and comparative freedom from disease.

The climate of certain portions of the State is considered specially suitable for ostrich farming, though it is not conducted on an extensive scale. The number of ostriches at the end of June, 1922, was 159, as compared with 662 at the close of the year 1913.

## PRICES OF LIVE STOCK.

The governing factor in the price of meat is the price paid for live stock at the metropolitan saleyards at Flemington, and that price is itself influenced by the world's market price for meat, hides, skins, &c., and by local climatic conditions.

The following statement shows the variations of the prices of fat stock during the years 1918 to 1922. Details of the monthly prices are published in the Statistical Register.

Stock.	1918.	1919.	1920.	1921.	1922.
Cattle.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Bullocks and Steers—					
Mean of Prime and Good.	17 9 6	18 8 0	18 7 0	9 14 0	7 18 0
Cows and Heifers—					
Prime ... ..	15 6 0	17 4 0	20 3 0*	9 9 0*	6 15 0
Calves, Vealers—					
Good ... ..	4 10 0	4 11 3	4 7 6	3 10 6	2 6 3
Sheep.					
Cross-bred—					
Wethers—					
Mean of Prime and Good	1 13 3	1 10 9	1 16 0	0 18 0	1 0 4
Ewes—					
Mean of Prime and Good	1 15 6	1 9 0	1 12 9	0 15 0	0 15 1
Merino—					
Wethers—					
Mean of Prime and Good	1 11 0	1 9 3	1 15 9	0 18 9	1 1 6
Ewes—					
Mean of Prime and Good	1 4 0	1 3 0	1 8 9	0 14 6	0 14 7
Lambs, Woolly—					
Mean of Prime and Good	1 5 3	1 2 0	1 7 3	0 14 0	0 17 9
Pigs.					
Porkers—					
Good ... ..	2 10 6	3 7 3	4 4 0	3 14 3	2 18 6
Baconers—					
Good ... ..	4 3 3	4 17 6	6 18 6	5 7 6	4 2 6

\* Extra Prime and Prime.

Subject to the operation of other factors, the prices of stock in local markets are influenced largely by the nature of the seasons, it being found generally that, during bad seasons, stock are hastened to market and prices are low; but, when the dry weather breaks, efforts to re-stock cause a decrease in yardings, and prices for a time are abnormally high.

In July, 1920, when the drought had ended, a sharp rise occurred in the prices of fat stock, supplies at the saleyards having diminished when graziers began to restock their holdings. The abnormal prices lasted for about three months, then the yardings increased, and the prices fell more rapidly than they had risen. Throughout 1921 prices declined steadily, though sheep tended to become dearer towards the end of the year in response to the more favourable prospects of the wool trade. This tendency continued until September, 1922, when they were approximately 100 per cent. dearer than in October, 1921. A steep decline then occurred until the end of the year, when a new rise commenced and by July, 1923, prices of fat sheep at Homebush were nearly 200 per cent. above the level of October, 1921.

The market for fat cattle declined throughout 1921, and the first half of 1922, but in July a sharp rise occurred, and the level of prices rose by 50 per cent. in the next twelve months, restoring the market to the position of January, 1921.

## MEAT TRADE.

The meat trade commenced to assume importance in New South Wales toward the end of the nineteenth century, when an export trade in frozen and chilled meat became possible through the provision of refrigerated space in ocean steamers.

Whereas, in the earlier years, surplus stock frequently found no better outlet than boiling-down works, and were, therefore, of no greater value than that of the hides or skins and tallow produced from them, an attractive oversea market for both frozen and canned meats has been opened. Boiling-down operations practically ceased, and the export trade grew steadily until it benefited from a sudden and strong impetus during the war period.

These developments were not without their effects on the local meat supply, and the opening, the expansion, and the boom of oversea trade, which occurred respectively about 1900, 1911, and from 1914 to 1921 caused substantial rises in the local prices of both beef and mutton. In the early part of 1921, however, as a consequence of a glut of meat in cold storage, values fell in the United Kingdom and a substantial reduction occurred in local meat prices, until by the middle of 1922 they were below the level prevailing in 1913. Reaction soon came, and a sudden rise occurred in July, 1922.

*Slaughtering.*

The slaughter of live stock for sale as food, either for local consumption or for export, is permitted only in places licensed for the purpose, in accordance with the Cattle Slaughtering Act, 1902.

The following table shows the numbers of slaughtering establishments and of employees, together with the total number of stock slaughtered in the State at intervals since 1901. Prior to 1920 the figures relating to the establishments of employees are in excess of the actual number, as they include a large number of butchers' shops in country districts and the shop hands employed therein.

Year.	Slaughter-houses.		Stock Slaughtered in Establishments and on Farms and Stations.					
	No.	Employees.	Sheep.	Lambs.	Bullocks. †	Cows.	Calves.	Swine.
1901	1,642	4,675	4,372,016	147,117	202,795	113,374	19,654	248,311
1906	1,522	4,391	4,229,407	252,648	237,722	94,955	26,200	281,650
1911	1,287	4,343	6,146,739	400,186	306,773	182,178	59,969	316,331
1916*	1,071	3,722	3,815,477	361,831	187,882	165,134	31,986	219,806
1920*	900	1,892	5,012,359	524,925	326,153	191,033	76,811	281,489
1921*	960	1,342	2,506,008	345,255	300,941	145,610	79,504	238,259
1922*	1,061	1,758	4,598,814	631,035	407,029	120,877	103,883	336,369

\* Year ended 30th June. † Includes a small number of bulls.

The majority of the stock, except swine, are slaughtered in the metropolitan establishments, though it is considered that many advantages would result if facilities were provided to treat all the stock in the districts where they are depastured. In 1921-22 the sheep and lambs slaughtered in the metropolitan districts numbered 3,429,923, cattle 369,865, and swine 159,707. The corresponding figures for the country establishments, including stock slaughtered on stations and farms, were sheep and lambs 1,799,926, cattle 261,924, and swine 176,662.



The particulars stated above relate to the stock slaughtered for all purposes, and the following statement shows the number of sheep and cattle used for local consumption as fresh meat and those frozen for export or preserved during the last three years :—

Purpose for which slaughtered.	1919-20.		1920-21.		1921-22.	
	Sheep and Lambs.	Cattle (including Calves).	Sheep and Lambs.	Cattle (including Calves).	Sheep and Lambs.	Cattle (including Calves).
Used for local consumption	No. 3,514,186	No. 475,187	No. 3,293,862	No. 478,140	No. 4,197,101	No. 565,306
Exported to other States or boiled down for tallow ...	37,561	6,698	22,175	2,834	25,645	4,300
Frozen or chilled for export	1,419,569	49,846	491,198	33,147	727,986	46,630
Required by meat-preserving establishments ...	551,996	56,508	44,028	11,934	279,117	15,553
Total Slaughtered ...	5,523,312	588,239	3,851,263	526,055	5,229,849	631,789

The comparison illustrates the fluctuations experienced in regard to the frozen and preserved meat industries; during the year ended June, 1921, there was a decline of 72 per cent. in the number of animals treated for those purposes. During periods of shortage meat frozen or chilled for export is released for local consumption. During the three years treated in the above table the numbers of carcasses of frozen lamb and mutton exported were 1,267,384, 466,942 and 1,006,343 respectively.

In country towns licensed slaughter-houses are inspected by a local officer appointed and controlled by the Local Government authorities. In Newcastle public abattoirs were established in 1912 under control of a local board, on similar lines to that already existent in Sydney.

In the metropolitan area stock is slaughtered at the State Abattoirs at Homebush Bay. Animals sold at Flemington are inspected before being killed and the diseased are destroyed, while "doubtful" beasts are marked for further special attention at the abattoirs. The inspecting staff at the State Abattoirs consists of a Chief Inspector, nineteen assistants, and two branders. Inspectors are stationed also at private slaughtering premises throughout the County of Cumberland. The operations of the inspectorial staff are supervised by the veterinary officers of the Metropolitan Meat Industry Board, who pay regular visits to the different establishments.

Particulars of stock slaughtered at the State Abattoirs during recent years are shown in the following statement :—

Year ended 30th June.	Cattle.	Calves.	Sheep and Lambs.	Pigs.
1914	96,939	28,626	588,027	31,848
1915	195,028	48,148	2,116,844	65,718
1916	100,794	19,137	1,309,810	64,884
1917	103,909	30,016	1,275,430	71,679
1918	101,084	23,132	1,061,471	93,567
1919	130,373	42,635	1,838,243	132,065
1920	209,649	65,824	2,542,348	94,595
1921	165,381	70,097	1,407,034	76,316
1922	210,927	88,102	2,260,196	114,766

Of the stock slaughtered at the State Abattoirs in 1921-22 the following numbers and proportions were condemned :—Cattle 1,252, or .59 per cent.;

calves 919, or 1·04 per cent.; sheep and lambs 1,355, or ·06 per cent.; and pigs 895, or ·78 per cent.

During 1916-17 the State Abattoirs were moved from Glebe Island to Homebush Bay.

The following table shows the numbers of stock yarded annually at Flemington saleyards, where most of the stock slaughtered in Sydney are sold :—

Year ended 30th June.	Sheep.	Cattle.	Year ended 30th June.	Sheep.	Cattle.
1913	2,721,356	265,126	1918	1,756,301	146,630
1914	2,805,207	276,440	1919	2,684,652	178,140
1915	3,381,937	255,876	1920	2,782,879	260,306
1916	2,317,602	158,453	1921	2,255,070	251,065
1917	1,711,246	149,604	1922	3,179,875	282,399

### *Meat Export Trade.*

The meat export trade of New South Wales has now assumed considerable proportions, and particulars of the attention given to sheep-breeding for this purpose may be found on a previous page.

Especial attention is given to preparation and transport of meat for export in order to ensure a high standard in the product.

Stringent regulations have been issued by the Department of Trade and Customs regarding inspection and shipment of meat exported. The work is carried out by the Commonwealth authorities. All stock killed for export are examined in a manner similar to those for local consumption, and carcases which have been in cold storage are re-examined immediately before shipment. In all the large modern steamers visiting the ports of New South Wales refrigerated space has been provided.

The meat trade is a comparatively recent development, and the number of stock available for export depends mainly upon the season, as in periods of scarcity the local demand absorbs the bulk of the fat stock marketed.

The quantity of frozen meat exported oversea in 1889 amounted to 37,868 cwt., valued at £33,426; two years later it had increased to 105,013 cwt., valued at £101,828; its subsequent development may be seen in the following table. The quantity of preserved meat exported was first recorded in 1887, when 9,701,812 lb., valued at £149,287, were exported; the trade in preserved meat is subject to considerable fluctuation. Ships' stores, amounting annually to several millions of pounds in weight, are not included in the following table :—

Year.	Frozen or Chilled.				Preserved.	
	Beef.	Mutton and Lamb.	Total Weight.	Total Value.	Weight.	Value.
	cwt.	cwt.	cwt.	£	lb.	£
1891	*	*	105,013	101,828	6,509,928	85,629
1896	26,529	559,507	586,036	294,596	14,365,300	187,957
1901	115,050	351,516	466,566	541,525	10,086,940	209,697
1906	32,640	455,165	487,805	579,294	3,121,933	62,307
1911	65,097	535,259	600,356	758,155	20,783,779	401,384
1915-16	7,000	236,099	243,099	562,262	4,087,618	159,711
1917-18	33,464	77,864	114,328	302,846	21,522,696	1,230,083
1918-19	21,363	173,122	194,485	497,784	33,836,189	2,000,846
1919-20	55,460	476,491	531,951	1,341,004	20,687,722	1,305,126
1920-21	110,727	166,039	276,766	937,040	4,479,460	235,801
1921-22	95,579	383,479	479,058	1,152,637	5,112,612	184,192

\* Not available.

There was, prior to the war, an encouraging development in the meat export trade, and the prospects of its establishment on a stable foundation appeared highly favourable. European countries were gradually opening their ports to frozen meat, and the trade in the East was increasing. The war, however, closed many markets and, through inability to secure freight space for commercial purposes, exports were hampered seriously. Early in 1915 arrangements were made in terms of the Meat Supply for Imperial Uses Act, for the purchase by the Imperial Government of the whole output of beef and mutton available for export during the period of the war. Details of the transactions were given in the chapter relating to "Food and Prices" in the 1920 issue of this Year Book.

The Imperial Government ceased to purchase meat in New South Wales in October, 1920, but exports to the United Kingdom by private traders were restricted for some months to enable the stocks already purchased to be shipped overseas; exports to other countries were allowed under permit. Towards the end of 1921, when all control by the Government ceased, the outlook for the trade appeared favourable. Although prices of frozen mutton and lamb in London had fallen, they were still much higher than in pre-war years, and supplies of fat stock in the local saleyards were readily obtainable. But the favourable anticipations were not realised, because the decline in the London market continued during 1922.

The movement of the London prices for Australian frozen meat during the last three years in comparison with 1913 is shown below. The quotations represent the monthly average of the weekly top prices.

Month.	Frozen Beef (Hinds) per lb.				Frozen Mutton per lb.			
	1913.	1920.	1921.	1922.	1913.	1920.	1921.	1922.
January ...	d. 3½	d. 13½	d. 11	d. 4½	d. 4½	d. 10½	d. 9	d. 5½
February ...	3½	11½	11½	4½	4	10½	9	6½
March ...	3½	11½	9½†	4	3½	9½	9†	6½
April ...	3½	12	6½	4½	4	9	8	6½
May ...	3½	12	5½	4½	3½	9	8	6½
June ...	3½	12	5½	4½	4	9	*	5½
July ...	4	12	5½	4½	4	9	*	5
August ...	4	12	5½	4½	4	9	*	5
September ...	4	12	5½	5	4	9	*	5½
October ...	4½	11	5½	4½	4	9	*	6½
November ...	4½	10½	5	4½	4	9	4½	7
December ...	4½	11	5	4½	4½	9	4½	7½
Annual Average ...	4	11½	6½	4½	4	9½	7½	6½

\* No quotation.

† Government control removed.

In 1920 the prices as stated for beef in the months January to September and for mutton during the whole year, represent the official maximum prices as fixed by the Government.

Two important changes occurred in the demand of the London market during 1921 and 1922—supplies of chilled beef from South America, which had been small since 1915, increased and exceeded their pre-war volume, while importations of frozen beef from all sources, including Australia, decreased heavily; in addition, the market demand favoured mutton and lamb, and beef was neglected, probably in reaction to its enforced consumption during the war period when mutton and lamb were scarce. As a consequence, excessive supplies of beef were always on hand during 1922,

and prices remained throughout the year at about the same level as in the latter part of 1913, and on account of increased freight and handling charges proved unprofitable to local growers. On the other hand, the demand for mutton was strong, and prices rose by 50 per cent. during the year. At the end of December, 1922, the London prices per lb. of Australian frozen meats were—Beef (hinds), 4½d.; mutton, 7½d.; and lamb, 11d.

The following comparison of the imports of meat to the United Kingdom during the past three years in comparison with those preceding the war, shows the relative importance of the principal suppliers in relation to Australia :—

Year.	Beef (000 omitted).				Mutton and Lamb (000 omitted).			
	South American.	Australian.	Other.	Total.	South American.	New Zealand.	Australian.	Total.
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
1912	341	45	14	400	86	108	49	243
1913	380	67	13	460	67	110	83	260
1914	336	78	28	442	67	119	66	252
1920	384	42	68	494	50	154	113	317
1921	441	84	56	581	92	223	21	336
1922	440	59	38	537	85	151	49	285

The following statement shows the average wholesale prices per pound obtained during the past ten years for Scottish and frozen mutton sold in London :—

Year.	Best Scottish.	New Zealand.	Australian.	River Plate.	Year.	Best Scottish.	New Zealand.	Australian.	River Plate.
	d.	d.	d.	d.		d.	d.	d.	d.
1913	7½	4½	4	4½	1918	13½	9	9	13½
1914	8½	5½	4½	4½	1919	14½	12	12	12
1915	9½	6½	5½	6½	1920	19½	9½	9½	9½
1916	12½	8½	7½	9	1921	18	8½	7½	7½
1917	14½	8½	8½	10½	1922	16½	8	6½	7½

The relative importance of the meat export trade of New South Wales is illustrated in the following statement showing the value of meat exported during the past ten years :—

Year.	*Value of Meat exported Oversea.	Proportion of Total Oversea Exports.	Year.	*Value of Meat Exported Oversea.	Proportion of Total Oversea Exports.
	£	Per cent.		£	Per cent.
1912	1,053,900	3·44	1917-18	1,673,328	4·49
1913	2,204,165	7·08	1918-19	2,733,699	5·62
1914-15	3,204,025	12·24	1919-20	2,761,015	5·42
1915-16	771,502	2·00	1920-21	1,225,354	2·54
1916-17	1,374,973	2·87	1921-22	1,382,275	2·88

\* Fresh, frozen, preserved and salted beef, mutton, and pork.

#### Meat Works.

Apart from slaughtering, important subsidiary industries in the handling of meat have arisen in the form of refrigerating and meat-preserving works.

The extent of their activities, however, is subject to marked seasonal fluctuations. Particulars of the numbers of sheep and cattle handled in the various works, and of the output during the past five years are shown below :—

Year.	Live Stock Handled.				Output of Meat Preserving Works.		
	Refrigerating Works.		Meat Preserving.		Tinned Meat.		By-Products.
	Cattle.	Sheep.	Cattle*.	Sheep*.	Weight.	Value.	Value.
	No.	No.	No.	No.	lb. (000).	£	£
1917-18	31,876	337,234	38,223	399,833	19,241	1,175,263	245,753
1918-19	32,337	583,695	41,517	648,435	24,189	1,514,078	279,237
1919-20	50,218	1,419,569	44,828	449,533	18,770	910,264	282,491
1920-21	34,147	491,198	4,740	13,988	1,751	74,747	25,337
1921-22	46,630	727,423	9,362	192,226	6,748	170,751	101,063

\* In addition to 9,295,000 lb. meat in 1917-18; 9,990,000 lb. in 1918-19; 9,822,000 lb., in 1919-20; 2,429,000 lb. in 1920-21, and 7,039,000 lb. in 1921-22.

#### OTHER PASTORAL PRODUCTS AND BY-PRODUCTS.

The minor products accruing from pastoral occupations include skins and hides, tallow, lard and fat, furs, hoofs, horns, bones bone-dust, glue pieces, and hair. Some of these are discussed in the chapter relating to the Manufacturing Industry, and will be given only brief mention here.

The oversea trade in these products is considerable, and though there was a marked decline in the volume of exports of many of the commodities during the war period owing to restrictions arising from war conditions, there was an increase in the total value, as higher prices were obtainable. Early in 1920, however, there was a pronounced drop in prices, and the trade experienced a serious setback. In the following year conditions improved, and the general tendency of prices was upward, though the movement was very irregular.

The following table contains particulars of the oversea exports of all minor pastoral products at intervals since 1901 :—

Products.	Oversea Exports.				
	1901.	1906.	1911.	1915-16.	1921-22.
<b>Skins and Hides—</b>					
Cattle ... .. No.	91,084	72,743	263,306	431,731	270,636
Horse ... .. No.	473	722	1,392	706	1,000
Rabbit and Hare ... lb.	*	7,380,455	5,795,839	4,352,640	5,399,928
Sheep ... .. No.	*	2,706,027	2,410,543	3,447,212	1,429,403
Other ... .. £	184,522	140,050	296,672	272,622	1,058,919
Bonedust ... .. cwt.	66,473	56,415	116,733	71,795	32,301
Bones ... .. cwt.	3,207	2,431	6,807	6,963	13,024
Furs (dressed and hatters, not on the skin). ... £	767	180	117	...	600
Glue-pieces and Sinews cwt.	12,862	11,003	20,580	13,276	2,782
Glycerine and Lanoline... lb.	*	336,586	138,347	218,673	3,482
Hair (other than human) lb.	165,562	142,636	255,819	336,765	28,635
Hoofs ... .. cwt.	2,215	2,839	3,733	4,518	4,987
Horns ... .. £	12,532	11,979	13,475	3,455	16,614
<b>Lard and Refined Animal</b>					
Fats ... .. lb.	13,633	56,737	227,000	73,461	2,048,946
Leather ... .. £	374,541	411,030	334,996	551,026	408,610
Sausage-casings ... .. £	2,567	17,033	52,562	31,595	184,976
Tallow (unrefined) ... cwt.	305,227	357,031	612,911	128,290	411,520
<b>Total Value... .. £</b>	<b>1,223,728</b>	<b>1,780,466</b>	<b>2,486,492</b>	<b>2,176,838</b>	<b>2,885,027</b>

\* Not available.

The bulk of the export trade in skins and hides is with the United Kingdom and the United States. The exports to the former country in 1921-22 included 373,583 sheep skins and 926,911 lb. of rabbit and hare skins. The United States received 59,123 cattle hides and 4,387,143 lb. of rabbit skins. Tallow was exported mainly to Japan, 175,059 cwt., and to the United Kingdom, 126,772 cwt.

#### VALUE OF PASTORAL PRODUCTS EXPORTED.

The total value of goods exported overseas, which may be classed as pastoral products or by-products (apart from dairy and farmyard products), is very large. Particulars of the value, as declared upon export, of such products exported overseas from New South Wales during each of the past four years are shown in the following table:—

Commodity.	1918-19.	1919-20.	1920-21.	1921-22.
	£	£	£	£
Wool—Greasy and scoured ...	17,819,394	16,460,916	11,206,900	17,625,351
Meat ... ..	2,733,699	2,761,015	1,225,354	1,382,275
Live stock ... ..	105,125	78,367	70,308	55,736
Items listed in previous table ...	3,668,880	9,827,842	3,385,838	2,855,927
Total ... ..	24,327,098	29,128,140	15,888,400	21,919,289
Proportion per cent. of value of all exports overseas...	47.6	52.9	30.2	45.6

The decline in exports during 1920-21 was due to two causes—the reaction after the drought and the temporary stagnation which followed the war. This year was in marked contrast with 1919-20, when values were high as a result of the post-war boom in trade.

The above figures are not comparable with those relating to the value of production which follow, since they contain items which have been enhanced in value by manufacture and other processes. In addition they are valued not as at the place of production but on the basis of f.o.b. Sydney.

#### VALUE OF PASTORAL PRODUCTION.

It is difficult, from the nature of the industry, to estimate the return from pastoral pursuits as at the place of production; but, taking the Sydney prices as a standard, and making due allowance for incidental charges, such as railway carriage or freight, and commission, the value during the season 1921-1922 is estimated to be £23,657,000. The returns received from the different kinds of stock during various years since 1901 are shown in the following table:—

Year.	Annual Value of Pastoral Production (000 omitted).					
	Wool.	Sheep Slaughtered.	Cattle Slaughtered.	Horses (cast).	Total.	Per Head of Population.
	£	£	£	£	£	£ s. d.
1901	8,425	2,071	1,229	722	12,447	9 2 1
1906	13,792	3,514	1,520	885	19,711	13 5 6
1911	12,933	2,811	1,689	2,001	19,434	11 13 5
1915-16	11,380	4,295	3,729	2,172	21,576	11 7 9
1916-17	16,435	4,616	4,026	1,765	26,842	14 3 5
1917-18	18,091	3,978	4,702	1,664	28,435	14 15 7
1918-19	18,865	4,728	4,633	1,639	29,865	15 3 8
1919-20	18,311	7,450	6,192	2,019	33,972	16 13 3
1920-21	12,744	2,313	2,973	2,027	20,057	9 11 11
1921-22	14,194	4,144	3,278	2,041	23,657	11 2 3

The value of the pastoral production depends mainly upon the prices obtainable for wool in the world's markets; but it is, of course, largely determined by the volume of production, which is dependent upon the seasons experienced in the State. The prices of wool rose considerably between 1914 and 1920, so that, while the quantity produced in 1919-20 was 7 per cent. less than in 1914-15, the total value was 62 per cent. higher.

The prices of livestock generally decline in a dry season, as graziers are forced to sell, owing to scarcity of pasturage; but, with an improvement in climatic conditions, the prices generally rise again, owing to the demand for re-stocking. The export prices of frozen meat began to rise steadily in 1911, and advanced at a rapid rate after the outbreak of war, to their highest level in 1918. During 1919 and 1920 there was a steady decline, and in 1921 the London prices, on which the export trade depends, fell precipitately. Prices of beef remained very low during 1922, but those for fat sheep and lambs rose to favourable levels.

#### NOXIOUS ANIMALS.

The only large carnivorous animals dangerous to stock in Australia are the indigenous dingo, or so-called native dog, and the fox, which has been introduced from abroad; but graminivorous animals, such as kangaroos, wallabies, hares, and rabbits, particularly the last-named, which, also, is of foreign origin, are deemed by the settlers even more noxious. In the latter part of 1920, however, native dogs became an increasing menace to flocks in the Western Division, and added considerably to the difficulties experienced by graziers in that region.

#### *Rabbit Pest.*

Rabbits, which are the greatest pest to the pastoralists, found their way into this State from Victoria; their presence first attracted serious attention in 1881, and they multiplied so rapidly that, in 1882, they were to be met on most of the holdings having frontages on the Murray River. A brief account of the measures taken to combat the pest is published on page 794 of the Year Book for 1921.

In order to check the migrations of rabbits the Government has erected a number of rabbit-proof fences. The longest of these traverses the whole State from north to south, proceeding from Barrington, on the Queensland border, to Bourke, and thence following the western side of the railway line, *via* Blayney and Murrumburrah, to Corowa, on the River Murray, a total distance of 696 miles. Another fence extends from the Murray northwards, 350 miles along the whole border between New South Wales and South Australia; while a third, built at the joint expense of the Governments of Queensland and New South Wales, extends from Mungindi to the Namoi River, about 115 miles. The total length of rabbit-proof fences erected by the State to 30th June, 1922, was approximately 1,332 miles, at a cost of £69,888; by Pastures Protection Boards, 688 miles, at a cost of £27,137; and by landholders privately, about 110,000 miles, at a cost of about £6,550,000.

The evil wrought by the rabbit is, of course, incapable of measurement, but estimates indicate that the losses due to the pest have been large, and considerable expense has been incurred in coping with it. It is contended, that the sheep-carrying capacity of the State has been reduced heavily as a consequence of the damage they cause to pastures, and this suggestion is

supported by the facts that the number of sheep in the State has declined since their appearance, and every bad season presents the spectacle of heavy losses in sheep through lack of natural fodder.

Although the damage caused by rabbits is considerable, it is compensated to some extent by their local use for food and their value for export as frozen meat, and skins.

Within the State these animals form a common article of diet, both in the metropolis and in the country, especially during the winter months, when large numbers of men are engaged in their capture and treatment. At the census of 1921 the number of men returned as engaged in trapping and kindred callings was 1,692, most of whom were doubtless engaged in rabbit-catching. The local consumption of rabbits as food is estimated at 60,000 to 80,000 pairs per week. The fur of rabbits and hares is used largely in the manufacture of hats, and of ladies' fur garments.

The following table shows the quantity and value of frozen rabbits and hares, and of rabbit and hare skins exported from New South Wales to countries outside Australia :—

Year.	Exports Oversea.				
	Frozen Rabbits and Hares.		Rabbit and Hare Skins.		Total Value.
	Quantity.	Value	Quantity.	Value.	
1901	pairs. *	£ 6,158	lb. *	£ 9,379	£ 15,537
1906	5,938,518	246,803	7,380,455	293,260	540,063
1911	6,806,246	330,741	5,795,839	295,476	626,217
1915-16	9,487,687	607,711	4,352,640	210,935	818,646
1917-18	8,978,377	670,269	6,986,837	1,036,188	1,706,457
1918-19	3,956,877	221,632	10,110,540	1,103,575	1,325,207
1919-20	6,890,636	537,877	9,927,240	2,702,652	3,240,529
1920-21	2,830,315	301,615	3,387,480	609,570	911,185
1921-22	4,399,272	371,491	5,399,928	559,463	930,954

\* Not available.

It is apparent that the rabbit industry has assumed an important place in the oversea trade of the State; although its volume is subject to pronounced seasonal and market fluctuations, the value is always considerable, and in the season of 1919-20 reached the surprising total of nearly £3,250,000. In that year, a boom in values occurred, and in February, 1920, the best skins sold at 26s. 3d. per lb. on the London market. It is estimated that the skins and carcasses exported during the year added to the numbers killed for local consumption, represented about 190,000,000 dead rabbits; the corresponding figure for the previous year was perhaps greater still. During 1920-21 the value of skins was considerably lower, although still favourable, while the price of frozen rabbits improved. The decline in exports in that year is probably attributable to the scarcity of rabbits as a result of the severe drought in 1918-20 and the heavy slaughter in those years. This surmise is borne out by the fact that although in 1921-22 values receded



still further, the volume of exports increased, indicating apparently a rapid multiplication of rabbits in the favourable season, 1921-22. The following statement affords a summary of the observations of inspectors in the various parts of the State respecting rabbits in the past five years :—

Year.	No. of Districts in which rabbits were reported to be—		
	Increasing.	Decreasing.	Stationary.
1917-18	39	15	13
1918-19	7	51	9
1919-20	2	61	4
1920-21	19	39	9
1921-22	25	30	12

The fluctuations indicated are due largely to seasonal causes, and in some measure to efforts made to combat the pest.

#### *Wire-netting Advances.*

Under the provisions of the Pastures Protection Act for the destruction of rabbits and noxious animals, the Minister for Lands is empowered to advance to Pastures Protection Boards money voted by Parliament for the purchase of netting and other materials used in the construction of rabbit-proof fences. Each board thereupon becomes liable to repay the advances by instalments with interest over a period not exceeding twenty years. In case of default in repayment the Colonial Treasurer is empowered to take possession of any moneys or property vested in the board and to levy rates as prescribed by the Act. The boards are empowered to sell such wire-netting and other materials to owners of private lands, repayments to be made by instalments with interest over a fixed period. The purchase money and interest is a charge upon the holding of the owner, and has priority over all debts other than debts due to the Crown.

The amount of wire-netting supplied to any individual is limited to 5 miles, and the rate of interest on advances is fixed at 6 per cent.

During 1922-23 the quantities of materials supplied to landholders under this scheme were 1,368 miles of wire-netting, 49 tons fencing wire, 22 tons barbed wire, in addition to sundry materials, of a total value of £65,003. Repayments during the year amounted to £28,824. An additional sum of £200,000 was voted by Parliament for these advances on the Loan estimates of 1922-23. At the close of the year the total of advances made since the inception of the scheme was £552,940, of which £391,139 had been repaid, leaving the balance of principal outstanding at £161,801.

#### PASTURES PROTECTION BOARDS.

For the purpose of administering the Pastures Protection Act which relates to destruction of rabbits and noxious animals, diseases of sheep, travelling stock, importation of sheep, sheep brands and marks, and certain minor matters, the State is divided into Pastures Protection Districts, for each of which there is constituted a board of eight directors, elected every three years by ratepayers from among their own number. There is also a Chief Inspector of Stock, appointed by the Governor, and other Inspectors, similarly appointed, who are paid from the funds of the Pastures Protection Districts to which they are attached. Each director of a board is *ex officio* an inspector in certain matters under the Act.

Rates to provide funds for the purposes of the boards are levied upon owners of ten or more head of large stock, or 100 or more sheep, at a rate not exceeding fourpence per head of large stock and two-thirds of a penny per head of sheep, but a reduction of one-half is made to occupiers of holdings which are considered rabbit-proof. Subsidy in respect of public lands may be paid to any board by the State. The funds so raised may be applied by the board to defraying expenses incurred in administering the Act, to clearing scrub, exterminating noxious weeds and noxious animals on travelling stock and camping reserves; and to any other approved purpose. In addition, the Governor may call upon the boards in any year to pay a proportion not exceeding 3 per cent. of their funds into the Treasury to cover the cost of administering the Act.

Since 1918 the boards have levied rates on travelling stock in the Eastern and Central Divisions to constitute a fund for the improvement of travelling stock and camping reserves handed over to the board's supervision.

The boards are empowered also to erect rabbit-proof fences as "barrier" fences wherever they deem necessary, to pay a bonus for the scalps of animal pests, and to enforce the provisions for the compulsory destruction of rabbits.

During the year ended 31st December, 1921, there were in existence sixty-seven Pastures Protection Boards. The amount of rates (including arrears) collected by sixty-five of these boards (for which particulars are available), was £74,129, and during the year £7,440 was paid as bonuses for heads, scalps, etc. At the close of the year the boards possessed bank balances, fixed deposits, and other securities to the amount of £51,861.

#### *Registration of Brands.*

The Registration of Stock Brands Act, which came into force on 13th December, 1921, cancelled the registration of all existing brands and provided for re-registration of those which owners desired to retain, upon application being made within a prescribed period. Of the 143,000 registered brands in existence at the time of passing the Act, 43,229 were re-registered, and to August, 1923, additional brands to the number of 9,192 have been registered, making the total number in existence at that date, 52,421.

#### *Cattle Tick Eradication.*

In the cattle districts of the north-east corner of the State, embracing the most productive dairying districts, the menace of the cattle tick has been growing steadily for a number of years, despite the methods adopted to combat it.

The first Act dealing expressly with this pest was passed in 1902, giving power to inspectors to deal with infected cattle by quarantine, disinfection, or destruction.

Since that date measures have been continued, but not always with the close co-operation of landholders. A Tick Board of Control disburses large sums annually in efforts to eradicate the tick, and the problem was dealt with comprehensively by the chairman of the Board in an article in the *New South Wales Agricultural Gazette* of March, 1923.

During 1921-22 the total number of cattle examined (including re-examinations) was 3,122,736, and 10,013 were found to be infected; 381,226 were treated by dipping, and 182,869 by spraying. Smaller numbers of horses were dealt with, 38 being found to be infected. The number of holdings in the quarantine area in 1921-22 was 5,949, of which 368 were infected. Ticks have existed in the Tweed quarantine area since 1906, and of 1,231 holdings in that district about 900 have been infected at one time or another.

## DAIRYING INDUSTRY.

THE natural conditions in parts of New South Wales are highly favourable to the development of the dairying industry. The soil and climate in the coastal portions of the State are suitable for the maintenance of the dairy herds with a minimum of expense and labour, as the rainfall is abundant and the animals do not require housing nor hand-feeding during a long winter, as in cold countries. Natural pasture is generally available throughout the year, but in very dry seasons hand-feeding becomes necessary.

Dairying in New South Wales is said to have begun during the twenties of last century in the immediate vicinity of Sydney and in the Illawarra districts to supply the growing population of the metropolis.

The development of dairying as a national industry is, however, comparatively recent, as its progress was retarded until the introduction of refrigeration enabled producers to overcome disabilities in manufacturing and distributing perishable dairy products in a warm climate and to export the surplus oversea. The application of machinery to the treatment of milk and the manufacture of butter, the development of the factory system, and improvements in regard to ocean transport have enabled production to expand beyond the limits of local requirements, and butter has become an important item of the export trade.

In the drier inland divisions the area devoted to dairying is not extensive, sheep and wheat farming being the main rural industries. In proximity to the centres of population dairy-farming is undertaken to supply local wants, and well-equipped factories have been established in a number of inland centres. Dairying is also an important industry on the Murrumbidgee and Hay irrigation areas.

In the coastal division more than 8,500 holdings are used exclusively for dairying, and about 5,000 for dairying and other purposes. In the other parts of the State, where fodder must be grown for winter feeding, the industry is nowhere extensive and is conducted usually in conjunction with wheat-farming and grazing—there being only about 500 holdings used solely for dairying, and 2,000 for dairying and other purposes.

Most of the native grasses of the State are particularly suitable for dairy cattle, as they possess milk-producing as well as fattening qualities. In the winter the natural herbage is supplemented by fodder, such as maize, barley, oats, rye, lucerne, and the brown variety of sorghum, or the planter's friend. Ensilage also is made for fodder, but not so generally as it should be, and the quantity made in each year varies considerably. The area of land devoted to sown grasses has been extended largely during recent years, and in June, 1922, amounted to 2,006,000 acres, of which 1,862,000 acres are in the coastal district; the produce of this land is used mainly as food for dairy cattle.

A Select Committee of the Legislative Council which investigated recently the condition of the dairying industry, emphasised the need for a better system of feeding, including conservation of fodder, improving pasturage, and growing crops. Successful dairying depends mainly on the proper feeding of the cows, and the conservation of fodder as ensilage was recommended for all dairying districts, especially for those areas where the rainfall is irregular. Another recommendation strongly urged by the Committee was the breeding of dairy stock on the lines of practical utility, and it stressed the need for a "better bull" campaign. It was pointed out that by improved methods of feeding and by culling unprofitable animals an annual average increase of 10 lb. of butter per cow could reasonably be expected, which, after allowing for the cost of herd-testing and the increased cost of feeding, would represent a substantial gain to the producers.

## SUPERVISION OF DAIRY PRODUCTS.

The manufacture, sale and export of dairy products, *i.e.*, milk, condensed milk, butter, cheese and margarine, are subject to supervision in terms of the Dairy Industry Act passed in December, 1915.

Dairy factories and stores must be registered, and are under the supervision of Government inspectors. Cream supplied to a dairy factory must be tested and graded at the factory, and the farmer is paid on the basis of the butter-fat results, or on the amount of butter obtained from his cream. Butter must be graded and packed in boxes bearing registered brands indicating the quality of the product and the factory where it was produced. The testing and grading at the factory may be done only by persons holding certificates of qualification. The Act provides also for the compulsory grading, on a uniform basis, of butter for local consumption and for exportation.

An experienced dairy inspector is appointed in each dairying district and is entrusted with the administration of the Act and regulations thereunder. He acts as inspector and instructs the factory managers and cream graders in matters connected with the industry.

Since the Dairy Industry Act came into force the quality of factory butter has shown a marked improvement, and in the year ended 30th June, 1922, 94.5 per cent. of the total output was classed as choicest or first-grade, whereas, formerly, only 50 per cent. of the quantity exported reached this standard.

Particulars regarding the supervision of dairies supplying milk for consumption as fresh milk, are shown in the chapter, "Food and Prices."

The supervision of dairy products for the oversea export trade is conducted by officers appointed by the Federal Government, under the Commerce (Trade Descriptions) Act of 1905.

## DAIRY INSTRUCTION.

Educational and experiment work relating to dairying is conducted by the Department of Agriculture at eight of the State experiment farms, and at the Hawkesbury Agricultural College.

The breeds of stud cattle kept at the various farms are as follows:—At Cowra and at Berry, Milking Shorthorn; at Wollongbar, Guernseys; at Grafton, Glen Innes and Yanco, Ayrshires; at Wagga Wagga and Bathurst, Jerseys. At the Hawkesbury Agricultural College, Jerseys hold a prominent place.

In order to enable factory managers and butter-makers to improve their scientific knowledge, dairy-science schools are held for short terms at different dairying centres, and certificates are given to those who pass examinations in the grading of cream, and in the testing of milk and cream.

During the year 1921-22 eight dairy science schools were held and 136 students attended.

## HERD-TESTING.

The extension of the practice of herd-testing is of primary importance to the future development of the dairying industry in New South Wales. For many years prior to 1888 the importation of cattle from oversea was prohibited, and in the period of rapid expansion, which began about 1900, there was a shortage of high-class-stock, with the result that many dairy farmers used inferior animals for breeding. The lifting of the embargo and subsequent importations by the Government and by private breeders have given the farmers an opportunity of obtaining a better class of dairy stock, and they are encouraged to improve their herds and to cull all unprofitable animals.

Farmers who supply cream to factories are paid according to the results of the testing and grading of their consignments, but these results, representing averages, do not disclose the necessary records of individual animals. Therefore efforts are being made by the dairy inspectors to organise in each dairying centre a herd-testing association on co-operative lines.

The testing of stud dairy herds has been undertaken by the Department of Agriculture, in conjunction with the United Pure-bred Dairy Cattle Breeders' Association of New South Wales. The number of completed tests from the inception of the scheme in 1913, to 1st March, 1923, was 4,035, and there were 366 cows under test at that date. The herd-testing associations had made records of about 100,000 cows up to February, 1923; and about 15,000 cows were tested during the twelve months ended 1st March, 1923.

All tests are carried out under rules prescribed by the Association. The standard lactation period is fixed at 273 days, but tests may be extended to 365 days. Certificates are issued by the Department of Agriculture, and records are published of all cows attaining the following standard of production for a 273 days' test:—Cows under 3 years of age, 166 lb. butter-fat; cows aged 3 to 4 years, 207 lb. butter-fat; cows aged 4 years and over, 249 lb. butter fat. Eighty-three pounds of butter-fat is adopted as equivalent to 100 lb. of commercial butter.

#### DAIRY CATTLE.

In the dairy herds the Shorthorn preponderates; this breed was introduced into the Illawarra or South Coast districts in the early period of dairying, before the Shorthorn had been developed by English breeders into a beef-producing type. By an admixture with other strains, a useful type of dairy cattle, known as the Illawarra, has been developed, and an association has been formed to establish the breed. There is also a large number of Jersey cattle, and the popularity of this breed for the production of butter is increasing. The Ayrshire is well represented in the dairy herds; it is noted for hardiness, but is considered as better suited for producing a large quantity of milk for human consumption as fresh milk, than for the purposes of butter-making.

The State Government, as well as private breeders, have imported a number of stud dairy stock for the purpose of improving the local herds. In 1898 the Government imported 24 bulls and 38 cows, including Shorthorns, Guernseys, Ayrshires, Kerry, Red Polls, and Holstein; additional Guernsey cattle were introduced later, viz., 22 cows in 1907, and 10 bulls and 15 cows in 1911. The importations by the State and by private breeders during the last twenty-two years included Jerseys, 28 bulls and 95 cows; Guernseys, 25 bulls and 81 cows; Ayrshires, 25 bulls and 29 cows; and during the last three years, Friesians, 7 bulls and 25 cows.

The number of cows used for milking in the State in various years since 1916 is shown below:—

As at 30th June.	Cows In Milk.		Dry Cows.	Heifers.		Total Cows used for milking.
	In Registered Dairies.	Other.		Springing.	Other, over one Year.	
	No.	No.	No.	No.	No.	No.
1916	426,227		317,368	92,124	207,999	1,043,718
1917	424,033		319,230	111,369	167,665	1,022,297
1918	429,556		347,834	110,827	177,872	1,066,089
1919	445,354		273,154	78,839	173,101	970,448
1920	419,732		277,888	72,311	133,092	903,023
1921	475,785		282,208	86,381	97,368	941,742
1922	414,557	86,665	*314,771	*68,222	*89,872	974,087

\* In registered dairies only.

Although the basis of classification was improved in 1922 in order to provide the return of separate particulars of the cows in registered dairies, the figures of each column are substantially comparable with those of previous years.

The heavy decrease (163,000) in the total number of milking cows during the two years ended 30th June, 1920, was due to the severe drought, which caused breeding to be restricted and a number of cows to be slaughtered for beef in order to avoid the expense of feeding. The next two seasons were on the whole favourable, and an increase of 71,000 occurred in the number of cows kept for milking.

The number of cows actually in milk at the time of taking the returns depends largely upon the period of the year—a greater number being in milk during the summer than during the winter and the number of dry cows being correspondingly smaller or larger. In addition the numbers of springing heifers are usually greater during June than December.

A comparison of the average daily number of cows in milk during the past eight years is shown on a later page under the heading "Milk."

#### *Dairy Farms and Registered Dairymen.*

Under the Dairies Supervision Act, 1901, every person keeping cows to produce milk for sale for human consumption in any form must register his premises and conform to prescribed standards of cleanliness, etc. Many persons so registered, however, conduct operations on a very limited scale.

The following statement shows a comparison for the past five years of the number of registered dairymen in New South Wales, and the number of holdings of one acre and upwards used for dairying operations on a commercial scale :—

Year.	*Registered Dairymen.	† Holdings of one acre and upwards used principally for—				
		Dairying only.	Dairying and Agriculture.	Dairying and Grazing.	Dairying, Grazing and Agriculture.	Total used for Dairying.
1918	18,435	6,794	5,150	1,810	1,463	15,217
1919	17,751	6,482	5,556	1,547	1,409	14,994
1920	18,449	6,799	4,859	2,377	1,425	15,460
1921	20,530	7,738	5,112	2,271	1,549	16,670
1922	20,748	9,092	5,214	2,342	1,818	18,466

\* At 31st December. † At 30th June.

It is apparent that less than one-half of the registered dairymen are dependent exclusively on milk products for their livelihood, but the proportion has increased very greatly in recent years. In 1922 the number of holdings used for dairying only constituted 11·5 per cent. of the total number of holdings 1 acre or more in extent.

#### *Dairy Factories.*

More than 95 per cent. of the milk products of the State are handled in factories (including farm factories), the balance being dealt with on the farms, principally for domestic purposes.

Most of the factories are conducted on co-operative principles with the suppliers as shareholders, and all are situated in the country districts at convenient centres.

Particulars of the establishments in the State treating dairy products are shown on page 402 of this Year Book.

The large number of establishments there shown as producing cream or milk represents farms utilising power-driven machinery for separating and other purposes. The number of dairy factories utilising machinery or employing more than four persons in 1921-22 was 208, comprising 129 butter factories, creameries, etc., 50 cheese factories, 19 bacon and ham factories, 6 producing butterine and margarine, and 4 producing condensed milk.

#### DAIRY PRODUCTION.

The following statement shows the quantities of the principal dairy products in each Division of the State during the year ended the 30th June, 1922 :—

Division.	Average No. of Dairy Cows in Milk during year.	Total yield of Milk.	Butter made.	Cheese made.
Coastal—	No.	gallons.	lb.	lb.
North Coast ... ..	249,402	121,917,385	49,915,321	1,561,446
Hunter and Manning ... ..	118,852	61,344,541	22,331,266	879,130
County of Cumberland ... ..	22,782	11,728,127	1,109,691	10,136
South Coast ... ..	74,113	41,603,106	11,059,874	4,090,643
Total ... ..	465,149	236,593,159	84,416,152	6,541,355
Tableland—				
Northern ... ..	19,008	8,144,899	2,885,712	374,299
Central ... ..	16,480	6,722,724	2,267,205	203,230
Southern ... ..	12,156	5,392,850	1,820,210	18,670
Total ... ..	47,644	20,260,473	6,973,127	596,199
Western Slopes—				
North ... ..	17,004	7,168,981	2,424,205	10,560
Central ... ..	6,973	2,649,421	991,731	50
South ... ..	18,135	7,690,973	3,605,335	1,620
Total ... ..	42,112	17,509,375	7,021,271	12,230
Central Plains—				
North ... ..	2,733	883,719	108,766	...
Central ... ..	5,171	1,724,685	264,781	108
Total ... ..	7,904	2,608,404	373,547	108
Riverina ... ..	16,132	7,708,377	1,850,970	217,165
Western Division ... ..	1,992	591,212	37,514	...
Total, New South Wales...	580,933	285,271,000	100,672,581	7,367,057

This statement illustrates the importance of the dairying activities in the coastal division as compared with the remainder of the State. In this area 80 per cent. of the cows are depastured, and more than 80 per cent. of the total output of milk, butter and cheese is produced. The North Coast Division surpasses any other division, except in regard to cheese-making, of which the bulk is made in the South Coast districts. The Hunter and Manning division is next in importance, then the South Coast. Twenty years ago the last-mentioned division was the principal dairying region,

but the industry has since made more rapid progress in the northern districts, where many large estates, used previously for raising cattle for beef, have been subdivided into dairy farms.

At the present time more than one-third of the butter made in the State is produced in county Rous in the extreme north-east corner, north of the Richmond River and east of the Richmond Range.

### Milk.

Particulars of the consumption and supply of milk and milk products are published in part "Food and Prices" of the Year Book.

Cows used for producing milk for sale are inspected by Government officers, who have power to condemn and prevent the use of animals considered unfit through being diseased. In 1921 inspections were made of 372,171 dairy cattle, or more than one-third of the total herds, and of these, 699, or less than two per thousand, were condemned—495 for tuberculosis, 144 for actinomycosis, 55 for cancer, and 5 for other diseases. Standards of milk sold for human consumption are also prescribed. By these means the purity and wholesomeness of dairy products are protected.

The steps being taken to increase the yield of milk per cow are treated in the earlier pages of this part. While sufficient information is not available to show the average annual production of milk per cow, it is certain that this average is very low and that, with the natural climatic advantage of a mild winter, great improvement is possible in this respect in New South Wales.

The following statement shows the total quantity of milk produced in the State (upon holdings of 1 acre and upwards in extent) during each of the past eight years in comparison with the average daily number of cows in milk during the year. The average per cow, as determined by dividing the latter figure into the former is, therefore, a measure of the average annual rate of production per cow, and shows to the extent to which the production per cow varies under seasonal influences.

Year ended 30th June	Average Daily Number of Cows in Milk during Year.	Total Yield of Milk. (000 omitted.)	Average Annual Rate per Cow.	Year ended 30th June.	Average Daily Number of Cows in Milk during Year.	Total Yield of Milk. (000 omitted.)	Average Annual Rate per Cow.
	No.	gallons.	gallons.		No.	gallons.	gallons
1915	513,420	237,930	442	1920	511,064	203,797	399
1916	465,044	184,014	396	1921	542,092	250,203	461
1917	551,623	226,004	410	1922	502,188*	259,563*	517*
1918	634,000	247,529	390		78,745†	25,708†	326†
1919	536,200	207,095	386		580,933‡	285,271‡	491‡

\* Cows in Registered Dairies.

† Other Cows in Milk.

‡ All Cows in Milk.

The estimate of the total yield of milk, shown above, is not absolutely accurate, but it is the best available. Few, if any, of the dairy farmers actually measure the yield of milk obtained from their cows, because they are concerned principally in producing cream. A large part of the yield of milk, therefore, is estimated from its cream content. The basis of estimation was improved in regard to the yield in 1921-22, and gave a slightly lower result than if methods formerly adopted had been used.



The yield of milk was lowest in 1916 when, owing to unfavourable weather, it fell to 184,014,000 gallons; in 1917 and 1918 there were substantial increases; but a severe drought caused a heavy falling off in the next two years. With a return to favourable climatic conditions a record was established in 1920-21 and a further record in 1921-22.

The number of cows milked was at its maximum in 1917-18, but the average yield was very low. A decline in both respects occurred in 1918-19 and 1919-20; then there was a marked improvement. In 1921-22 the production per cow was greater than in any previous year recorded, being about 18 per cent. greater than the mean of the previous seven years—the longest period for which particulars are available. Information as to the number and yield of the cows in registered dairies was collected for the first time in 1921-22; the average yield in the year was very much greater than that of cows used for domestic purposes.

In the absence of information concerning the total number of cows milked and the periods for which they were milked during the year, it is not possible to ascertain definitely the average quantity of milk produced per dairy cow; but, for an assumed lactation period of 260 days, the yield of milk per cow in registered dairies during the year 1921-22 was on the average 368 gallons, equivalent to about 168 lb. of commercial butter. In the report of the Select Committee of Inquiry in 1921 it was stated that the most progressive countries now have an average of over 200 lb. of butter per cow, and some, like Denmark and the Netherlands, have an average as high as 300 lb.

#### *Use of Milk.*

The following statement shows the estimated amount of milk used for various purposes during the years 1916-17 and 1921-22:—

	1916-17. gallons.	1921-22. gallons.
Used for butter made on farms ...	12,640,000	14,805,000
"      "      in factories ...	166,095,000	208,399,000
	<hr/> 178,735,000	<hr/> 223,204,000
Used for cheese made on farms ...	2,186,000	332,000
"      "      in factories ...	5,848,000	7,377,000
	<hr/> 8,034,000	<hr/> 7,709,000
Used for sweet cream ... ..	405,000	2,907,000
"      condensing ... ..	1,693,000	2,372,000
Pasteurised for metropolitan and New- castle markets ... ..	11,368,000	13,575,000
Balance sold and used otherwise ...	25,769,000	35,504,000
	<hr/> 226,004,000	<hr/> 285,271,000
Total ... ..		

In 1921-22 the milk used for making butter represented 78 per cent. of the total production; 3 per cent. was used for cheese; about 1 per cent. for condensed milk; and the balance was consumed as fresh milk or sweet cream, or used otherwise.

The quality of the milk as indicated by the percentage of butter-fat is very important, and it is satisfactory to note that, during adverse seasons, the quality is fairly well maintained. The following statement shows the

quantity of commercial butter produced per 100 gallons of milk treated on farms and in factories during each of the last ten years :—

Year ended 30th June.	Quantity of Commercial Butter per 100 gallons of Milk treated.		
	On Farms.	In Factories.	On Farms and in Factories.
	lb.	lb.	lb.
1915	33·8	44·3	43·7
1916	33·9	43·5	42·6
1917	34·0	45·2	44·4
1918	35·2	44·5	43·8
1919	35·3	44·5	43·8
1920	34·2	43·5	42·8
1921	33·9	44·8	44·0
1922	33·6	45·9	45·1

The apparent increase in the quantity of butter made from milk in factories in 1921-22 is attributable largely to the improvement effected in estimating the quantity of milk used in butter factories in 1921-22; the averages for previous years as shown are somewhat understated, but indicate the seasonal variations fairly closely.

During the period under review the quantity of butter per 100 gallons of milk increased appreciably; the average for factories in 1921-22 was 12·3 lb. per 100 gallons higher than in the case of milk treated on farms. Doubtless this is due to improved methods of treatment and to the fact that the farmer is paid for his cream in accordance with the quantity of butter obtained from it.

In recent years it has become the practice to instal hand or small power separators on each farm. The number of farms with power separators in 1921-22 was approximately 1,250. Thus the farmers have been able to effect great economy of time and labour, as the cream need not be taken to the factory at such frequent intervals as formerly, and considerable advantage is derived by the supply of freshly separated milk for the farm stock.

#### *Preserved Milk.*

Three kinds of preserved milk are produced in New South Wales, viz., sweetened condensed milk, unsweetened condensed milk, and concentrated milk.

Since 1913 there has been great progress in the manufacture of preserved milk; in that year there were two factories, employing 42 hands, and the value of land, buildings and plant amounted to £16,300; in the year ended June, 1922, there were four factories, with 192 hands, and the value of land and plant had increased to £59,061.

The increase in the output since 1913 is shown below :—

Year ended 30th June.	Milk treated.	Condensed and Concentrated milk produced.	
		Quantity.	Value.
	gal.	lb.	£
1913	1,062,000	3,682,800	52,734
1920	3,619,000	12,969,700	383,840
1921	4,144,000	14,938,100	495,098
1922	2,372,000	6,860,516	319,218

The reduced production during the year 1921-22 was due to the partial closing down of works.

The output in 1921-22 consisted of condensed milk, sweetened 5,314,266 lb., unsweetened 441,443 lb., concentrated 266,060 lb., and powdered milk 838,747 lb.

Recently there has been an amalgamation of the companies engaged in the manufacture of these milk products in Australasia.

### Butter.

The following statement shows the quantity of butter made, and the milk used for that purpose, at intervals since 1901. In distinguishing between the milk treated on farms and in factories, the quantity used in farm-factories, whether worked by a separate staff or by farm employees, has been included in the statistics relating to factories.

Year.	On Farms.			In Factories.			Total.		
	Milk used.	Butter made.	Milk used per lb. of Butter.	Milk used.	Butter made.	Milk used per lb. of Butter.	Milk used.	Butter made.	Milk used per lb. of Butter.
	(000 omitted.)			(000 omitted.)			(000 omitted.)		
	gallons.	lb.	gal.	gallons.	lb.	gal.	gallons.	lb.	gal.
1901	14,168	4,775	2·97	82,304	34,282	2·40	96,472	39,057	2·47
1906	14,288	4,637	3·08	141,761	54,304	2·61	156,049	58,941	2·65
1911	14,034	4,632	3·03	182,947	78,573	2·33	196,981	83,205	2·37
1913	13,342	4,474	2·98	172,387	73,305	2·35	185,729	77,779	2·39
1915*	11,272	3,805	2·96	181,194	80,329	2·26	192,466	84,134	2·29
1916*	12,593	4,258	2·96	127,323	55,374	2·30	139,916	59,632	2·35
1917*	12,627	4,294	2·94	166,108	75,070	2·21	178,735	79,364	2·25
1918*	12,947	4,580	2·83	170,673	75,888	2·25	183,620	80,468	2·28
1919*	11,461	4,043	2·83	139,347	61,966	2·25	150,808	66,009	2·28
1920*	10,178	3,478	2·93	137,194	59,657	2·30	147,372	63,135	2·33
1921*	12,945	4,388	2·93	178,411	79,880	2·23	191,356	84,268	2·27
1922*	14,805	4,978	2·97	208,399	95,695	2·18	223,204	100,673	2·22

\* Year ended 30th June.

For reasons explained above the decrease in the quantity of milk used per pound of butter in factories in 1921-22, as shown in this table, was more apparent than real, the previous averages being slightly overstated.

The proportion of factory-made butter in the total production has increased from 72 per cent. in 1895 to 95 per cent. during 1921-22, a result of the greater efficiency of factory as compared with farm methods. On the average nearly 3 gallons of milk were required to make a pound of butter on the farms, as compared with less than 2½ gallons in the factories. Nearly all the factories dealing with dairy produce are established on the co-operative system.

The combined effects of a bad season and scarcity of shipping-space for export trade caused a marked decrease in the butter produced in 1916. In the following year a most successful season was experienced, and the output rose to 79,364,471 lb., or 33 per cent. higher than in 1916. The improvement was maintained in 1918, when the production amounted to 80,468,007 lb. The reduced output in 1919 and 1920 was largely due to drought conditions prevailing in the coastal districts during the year, but in 1921 the production rose to a level slightly higher than in 1915, previously the highest on record. In 1921-22 the production exceeded 100,000,000 lb., constituting a record for the State.

Further particulars regarding butter factories are given in the chapter relating to Manufacturing Industry at page 401.

*Cheese.*

Excellent conditions exist in New South Wales for the production of cheese, but cheese-making has not advanced to the same extent as the manufacture of butter, the latter being more profitable.

The industry is retarded by the great disadvantages of cheese as an article of export. It matures quickly, and, unlike butter, cannot be frozen, and after a certain period decreases in value. Moreover, cheese represents little more than half the money value of butter for the same weight, while the cost of freight is practically the same.

The Select Committee, to which reference was made above, assigns the unsatisfactory condition of this section of the dairying industry to the fact that there is not the legislative power to control adequately the manufacture of cheese, as in the case of butter. It should be made compulsory to grade the milk, and to pasteurise it; also to grade the cheese according to quality.

From a previous table showing the cheese made in the various divisions of the State, it will be seen that more than half of the total production during the 1921-22 season was made in the South Coast Division.

The following table shows the production of cheese in factories and on farms at intervals since 1901.

Year.	Production of Cheese.		
	In Factories.	On Farms.	Total.
	lb.	lb.	lb.
1901	2,428,599	1,410,236	3,838,835
1906	3,459,641	1,999,004	5,458,645
1911	4,617,387	843,265	5,460,652
1916*	4,969,374	1,010,262	5,979,636
1918*	7,120,770	678,906	7,799,676
1919*	5,500,298	481,822	5,982,120
1920*	6,230,350	532,117	6,762,467
1921*	5,965,715	441,494	6,407,209
1922*	7,044,567	322,490	7,367,057

\* Year ended 30th June.

During the five years, 1901-06, the production increased from less than 4 million pounds to nearly  $5\frac{1}{2}$  millions; it remained at that level until 1911. In 1916-17 purchases by the Imperial Government for the use of troops led to increased production, and the output of 7,830,239 lb. was the highest on record. In the adverse season of 1919 the production declined to the former level, but it has since improved. Cheese-making on farms was formerly extensive, but is now declining into insignificance. The output of factories reached its highest level in 1917-18 and its highest proportion in 1921-22, viz., 96 per cent. of the total output.

## SWINE.

The breeding of swine is conducted usually on dairy farms, where a large supply of separated milk is available for fattening the stock; pigs are reared also in agricultural districts, where special crops of maize, peas, etc., are grown for them. Pigs increase rapidly, so that there is a danger of an over-supply on the market unless a steady export trade is developed. The export is small and variable, and for this reason pig-raising has not progressed to the same extent as the dairy industry.

The principal breeds of swine are the Berkshire, prized because it is fattened readily; the Poland China, which thrives in the North Coastal districts; the Tamworth, which is useful for crossing with fat breeds to secure a good bacon pig; and a type called the Middle Yorkshire, which has been fixed by crossing the Large and Small Yorkshires. Stocks of high-class strains may be purchased at the Government experiment farms and other institutions.

The following table shows the number of pigs in New South Wales at intervals since 1891 :—

Year.	Swine.	Year.	Swine.	Year.	Swine.
	No.		No.		No.
1891	253,189	1912	293,653	1918*	396,157
1896	214,581	1913	288,090	1919*	294,648
1901	265,730	1915*	286,704	1920*	253,910
1906	243,370	1916*	281,158	1921*	306,253
1911	371,093	1917*	359,763	1922*	383,669

\* As at 30th June, previously as at 31st December.

The figures show remarkable fluctuations, but, since 1901, there has been a tendency to increase; in 1918 the number, 396,157, was the highest yet attained, but it declined to 253,910 in 1920, owing to adverse seasons. There was a substantial increase in 1921, and again in 1922. At 30th June, 1922, the pigs less than one year old included 6,415 boars, 59,129 sows, 67,733 barrows, and 159,109 suckers; and the pigs aged one year and over included 12,971 boars, 59,801 sows, and 18,511 barrows.

The following statement shows the number of pigs in various divisions of the State and the production of bacon and ham at intervals since 1911 :—

Division.	1911.		1921.*		1922.*	
	Swine.	Bacon and Ham cured.	Swine.	Bacon and Ham cured.	Swine.	Bacon and Ham cured.
	No.	lb.	No.	lb.	No.	lb.
Coastal ... ..	255,361	13,845,520	208,903	14,781,094	251,126	18,582,523
Tableland ... ..	45,578	1,124,091	29,700	597,872	39,423	739,056
Western Slopes ... ..	42,258	666,173	39,599	422,712	56,460	561,187
Remainder of State ... ..	27,896	467,043	28,051	455,564	36,660	540,104
Whole State ... ..	371,093	16,102,827	306,253	16,257,242	383,669	20,422,870

\* Year ended 30th June.

This table shows that the production of bacon has increased since 1911 in the dairying districts of the coastal division, and 91 per cent. of the total production of bacon in 1921-22 was cured in those districts. In the tableland division there has been a marked decline, and little or no progress has been made in other parts of the State.

*Interstate Movement of Pigs.*

The introduction of pigs from other States is closely regulated in order to prevent the spread of the various diseases current among these animals and, on the whole, few pigs are brought into the State except for slaughtering in adverse seasons. There is on the other hand a regular movement of pigs from New South Wales to Queensland and, on a smaller scale, to Victoria.

*Bacon and Hams.*

The number of bacon factories has increased considerably since 1906, but the production of bacon in New South Wales is not usually sufficient for local requirements, and quantities are imported from other States; such imports in 1921-22 exceeded 3,000,000 lb.

The output of bacon and hams from factories and farms at intervals since 1891 is shown hereunder:—

Year.	Production of Bacon and Ham.		
	Factory.	Farm.	Total Production.
	lb.	lb.	lb.
1891	2,120,300	3,889,300	6,009,600
1901	7,392,100	3,688,800	11,080,900
1911	13,393,500	2,709,300	16,102,800
1916*	11,637,900	1,938,700	13,576,600
1918*	15,602,900	2,952,200	18,555,100
1919*	13,935,700	2,866,000	16,801,700
1920*	14,938,300	1,731,300	16,669,600
1921*	14,625,800	1,631,400	16,257,200
1922*	18,544,067	1,878,803	20,422,870

\* Year ended 30th June

During the first decade of the period under review the production of bacon showed a substantial increase, but during the drought of 1902-03 there was a decline, and the industry did not recover from the effects for some years. During the ten years, 1901 to 1911, the output increased from 11,000,000 lb. to over 16,000,000 lb.; in 1915-16 the production declined again, but in 1918 it rose to 18,555,000 lb. The seasons immediately following were not so favourable, but in 1921-22 the production increased markedly, and exceeded 20,000,000 lb. for the first time.

*Lard.*

Statistics showing the total production of lard are not available. During the year ended 30th June, 1922, the quantity extracted in bacon factories amounted to 771,239 lb., valued at £22,934; but as the manufacture of this product is conducted in many other establishments, as well as on farms, this quantity represents only a portion of the total output.

During the twelve months ended 30th June, 1922, the oversea exports of lard and refined animal fats amounted to 2,048,946 lb., valued at £61,509, as compared with the direct imports from oversea countries amounting to 48,892 lb., valued at £1,988.

## LOCAL CONSUMPTION OF DAIRY PRODUCTS.

The local consumption of milk and butter in New South Wales is comparatively high; the average consumption per head in 1921-22 was as follows:—Fresh milk, 20·6 gallons, preserved milk 5·5 lb., butter 27·0 lb., cheese 3·3 lb., bacon and ham 10·2 lb. With a population of about 2,200,000, the local requirements amount to 45,000,000 gallons of fresh milk per annum, 12,000,000 lb. of preserved milk, 60,000,000 lb. of butter, 7,250,000 lb. of cheese, and 22,000,000 lb. of bacon and ham. Comparison with the figures on the foregoing pages show that the State is self-supporting in regard to milk and butter and cheese, and that a small proportion of the bacon supply is imported—generally from the other States of the Commonwealth. During the summer months, when production is at a maximum, a quantity of butter is placed in cold storage in order to ensure an adequate supply during the winter. This matter is treated more fully in Part “Food and Prices.”

## EXPORTS OF DAIRY PRODUCTS.

Dairy products for export beyond the Commonwealth are subject to inspection by Federal Government officials under the provisions of the Commerce Act, 1905, and the exportation of inferior products is prohibited unless the goods are labelled as below standard. Upon the request of the exporters, butter and cheese are graded and certificates as to quality are issued.

The following table shows the overseas exports of the principal dairy products from New South Wales, inclusive of ships' stores, at intervals since 1891. The particulars for 1906 and earlier years relate to New South Wales produce only, but in later years the figures include a small quantity of the produce of other Australian States, and exclude a small quantity of New South Wales produce exported through the States.

Year.	Overseas Exports.							
	Butter.		Cheese.		Milk—Preserved, Condensed, etc.		Bacon and Ham.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lb. (000)	£	lb. (000)	£	lb. (000)	£	lb. (000)	£
1891	11	478	18	411	...	...	9	380
1896	1,912	75,994	45	821	8	156	40	994
1901	8,700	379,342	174	4,359	196	2,525	96	3,007
1906	23,362	978,725	123	3,268	258	4,906	141	4,996
1911	33,044	1,518,993	127	3,723	1,127	17,471	618	17,561
1916*	4,306	259,834	191	9,767	947	22,052	224	11,279
1921*	28,429	3,458,280	804	49,813	11,576	691,122	1,357	132,075
1922*	36,730	2,327,080	629	26,565	3,634	203,483	1,053	80,641

\* Year ended 30th June.

The decline in the exports in 1915-16 was due to shortage of shipping space. The export trade in butter is almost entirely with the United Kingdom; during the year 1920-21, the quantity available for export was higher than in any year of the war period, the season was good, and remunerative prices were obtainable in London. The exports of condensed milk increased rapidly during the war period.

The other dairy and farmyard products exported overseas in 1921-22 were of small importance, viz., pork £7,193, poultry £47,511, and eggs £42,934, making a total of £2,735,000, including the items listed above.

The imports into the United Kingdom of butter produced in New South Wales during the last ten years are shown hereunder, and the proportion they bear to the total imports of butter.

Year.	Imports of Butter from New South Wales.	Proportion to Total Butter imported into United Kingdom.	Year.	Imports of Butter from New South Wales.	Proportion to Total Butter imported into United Kingdom.
	cwt.	per cent.		cwt.	per cent.
1912	186,695	4.61	1917	169,024	9.36
1913	155,936	3.77	1918	198,751	12.59
1914	122,528	3.08	1919	118,974	7.63
1915	158,222	4.16	1920	74,166	4.36
1916	32,575	1.50	1921	244,689	6.94

The freight on butter forwarded from Sydney to London during the 1921-22 season ranged from 5s. to 6s. per box of 56 lb. The rate has increased considerably since June, 1914, when it ranged from 2s. to 2s. 6d, per box.

In 1917 arrangements were made to form a pool to negotiate the sale of the Australian butter available for export, and the whole of the surplus was purchased by the Imperial Government until 31st March, 1921. After that date the exports were handled by an association of the local distributing firms until October, 1921, when the open market was restored.

The price of Australian butter in London was fixed by Government proclamation in September, 1917, at 206s. per cwt., in November of that year the price was raised to 220s. In January, 1918, the flat rate of 252s. per cwt. was fixed by the Government for all imported butter, and this rate remained constant until January, 1920. The subsequent changes in the price are shown in the following statement of the general average top price for Australian butter of the choicest and first-grade quality in London (as reported by the "Statist") in comparison with the average monthly price of first-grade butter in Sydney during 1922:—

Average Price per Cwt.					Average Price per Cwt.				
Month.	1920.	1921.	1922.		Month.	1920.	1921.	1922.	
	London.	London.	London.	Sydney.		London.	London.	London.	Sydney.
	s. d.	s. d.	s. d.	s. d.		s. d.	s. d.	s. d.	s. d.
January ...	256 9	336 0	120 6	140 0	July ...	266 0	208 0	209 3	219 7
February ...	270 8	298 8	120 0	128 10	August ...	266 0	244 0	190 9	224 0
March ...	303 4	298 8	136 0	126 2	September	303 4	222 0	199 6	224 0
April...	303 4	273 0	166 6	155 1	October ...	336 0	188 0	202 3	196 5
May ...	303 4	206 0	157 9	192 7	November...	336 0	170 0	194 9	171 5
June ...	303 4	182 6	186 0	196 11	December	336 0	150 0	167 3	168 0

The price of butter in London has fluctuated violently during the last three years, there being a particularly severe decline during 1921. London parity of the price in Sydney may be determined by adding 20s. per cwt. to the price shown. Throughout 1920, and until May, 1921, London parity of local prices was below the price in London, since then the reverse has usually been the case.



## POULTRY-FARMING.

Poultry-farming was conducted formerly in conjunction with dairying; but the interests involved have become so important commercially in recent years that a distinct industry dealing with poultry alone has been developed. Every effort is made to obtain the benefits of modern methods of poultry-farm management, and to secure the best egg-laying and table breeds. To assist poultry-farmers, the Department of Agriculture issues various publications on poultry culture and employs a Poultry Expert, whose advice is always available. There is also a Government Poultry Farm at Seven Hills, used for demonstration and educational purposes in connection with the Department's activities for the benefit of poultry-farmers. Accurate statistics of poultry production are not available, but a general estimate based on accessible returns shows that the value of production during 1921-22 was approximately £2,650,000; and in 1922-23 the value of eggs exported overseas was £87,000, almost entirely to the United Kingdom, and of poultry £41,000, principally to the United States.

Special attention is devoted to improving the laying qualities of the different breeds, and egg-laying competitions, organised originally by private subscription, have been conducted since 1901 at the Hawkesbury Agricultural College, with the object of stimulating the poultry industry. These competitions have attracted widespread interest, and birds for competition are sent from all parts of New South Wales, from the other Australian States, from New Zealand, and some from America.

By this means much valuable information has been gained from practical experiment and research; tests are arranged and records are kept of the cost of feeding, and of the results obtained from the various breeds of poultry, and by different methods of treatment. The expansion of poultry-raising in recent years has received a great impetus from this source, inasmuch as it produced data, previously unobtainable, as to the possibilities of poultry-farming as a business, and stimulated the idea of breeding for high egg production.

An annual report in bulletin form, giving particulars and tabulated results of these competitions is issued by the Department of Agriculture.

## BEE-KEEPING.

The bee-keeping industry is at the present time of small importance, though there is ample inducement for further expansion.

The production of honey and of beeswax varies considerably from year to year, as shown in the following table:—

Season.	Bee Hives.			Honey.	Average Yield of Honey per productive Hive.	Beeswax.
	Productive.	Un-productive.	Total.			
	No.	No.	No.	lb.	lb.	lb.
1910-11	55,958	14,308	70,266	2,765,618	49·4	72,617
1917-18	50,668	10,314	60,982	3,875,511	76·4	53,342
1918-19	27,629	16,230	43,859	879,776	31·8	19,231
1919-20	17,534	10,384	27,918	472,340	26·9	12,195
1920-21	28,041	6,387	34,428	1,443,377	51·5	23,320
1921-22	34,129	7,369	41,498	2,989,074	87·6	28,385

The yield per productive hive improved considerably as a result of the enactment of the Apiaries Acts in 1916 and 1917, and the average in 1917-18, 76·4 lb., constituted a record at the time, being 56 per cent. above the experience of the previous ten years. The years 1918-19 and 1919-20 were disastrous for the bee-keeping industry, owing to prolonged dry weather and absence of flowers. There was high mortality amongst the bees, the total number of hives decreasing in these two years by 54 per cent., and bee-keeping as an industry was in a worse position than at any time during the previous ten years. The production in the season 1919-20 was the lowest in the period under review. A more favourable season was experienced in 1920-21, and the yield of honey was three times the quantity produced in the preceding year, and the average yield per hive was almost twice as high, though it was nearly 33 per cent. below the record of 1917-18. The season 1921-22 was particularly favourable and, although the number of productive hives was small, a new record was established in production, viz., 87·6 lb. per hive.

Frame hives are now in general use, as the box-hive has been condemned. Special legislation which has been passed with reference to apiculture is more fully detailed at page 655 of the Year Book for 1918.

In 1921-22 the estimated value of the production from bees was £53,000, the quantity of production in each division being as follows :—

Division.				Honey.	Beeswax.
				lb.	lb.
Coastal	...	...	...	408,856	7,263
Tableland	...	...	...	2,205,945	16,098
Western Slopes	...	...	...	301,763	4,070
Central Plains and Riverina	...	...	...	67,472	930
Western Division	...	...	...	5,038	24
Total	...	...	...	2,989,074	28,385

#### VALUE OF DAIRY AND FARMYARD PRODUCTION.

It is evident from the foregoing that the dairying and farmyard industries are important factors in the rural production of New South Wales. The value of production in 1921-22 amounted to £12,914,000, or £6 1s. 4d. per head of population; the dairying industry yielded £9,286,000, swine £925,000, poultry £2,650,000, and bees £53,000. The value of production in each year since 1911 has been as follows :—

Year.	Milk for Butter.	Milk for Cheese.	Milk (not used for Butter or Cheese).	Milch Cows.	Swine.	Poultry and Eggs.	Bees.	Total.
	(000) £	(000) £	(000) £	(000) £	(000) £	(000) £	(000) £	(000) £
1911	3,631	129	619	389	447	1,280	36	6,534
1912	3,895	168	750	406	539	1,401	33	7,192
1913	3,450	170	950	385	500	1,578	30	7,063
1914-15	4,038	170	962	523	538	1,597	18	7,846
1915-16	3,198	167	1,084	419	605	2,144	32	7,649
1916-17	4,740	227	1,059	657	795	1,908	33	9,419
1917-18	4,954	250	1,618	668	990	2,082	73	10,635
1918-19	4,537	204	1,949	709	1,153	2,501	20	11,073
1919-20	4,712	278	2,132	721	1,121	2,814	15	11,793
1920-21	8,411	306	2,751	603	1,120	3,196	50	16,447
1921-22	5,800	228	2,359	899	925	2,650	53	12,914

The value of production from these industries increased during the period under review from £6,534,000 to £16,447,000 in 1920-21, when boom values ruled and the drop in 1921-22 was occasioned by a return to lower values, although the quantity of production in the year was a record. The bulk of these commodities is produced for home consumption, and prices rise and fall in accordance with local seasonal conditions. For this reason the annual value of production does not reflect a decreased yield in adverse seasons to the same extent as agricultural and pastoral products produced for the oversea market.

Butter is the principal item of dairy produce; the value of the milk used in the production of butter in 1921-22 was £5,800,000, as compared with £3,631,000 in 1911.

The return from poultry, which are kept on a great many holdings, is next in importance, and it has increased considerably during the last three years; the production from the industry is somewhat understated, because records are not obtainable of the production on areas of less than one acre.

#### WHOLESALE PRICES.

The average wholesale prices obtained during the last six years in the Sydney markets for the principal kinds of dairy and poultry farm produce are shown in the following table. The average quoted for the year represents the mean of the prices ruling each month, and does not take into account the quantity sold during the month.

Dairy and Poultry Farm Produce.	1914.	1917.	1918.	1919.	1920.	1921.	1922.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Milk ... gal.	0 0 11 <sup>3</sup> / <sub>4</sub>	0 1 2 <sup>1</sup> / <sub>4</sub>	0 1 2 <sup>3</sup> / <sub>4</sub>	0 1 6 <sup>3</sup> / <sub>4</sub>	0 1 9	0 1 8 <sup>3</sup> / <sub>4</sub>	0 1 8
Butter ... lb.	0 0 11 <sup>1</sup> / <sub>2</sub>	0 1 4 <sup>1</sup> / <sub>4</sub>	0 1 4 <sup>3</sup> / <sub>4</sub>	0 1 7 <sup>1</sup> / <sub>4</sub>	0 2 1	0 1 9 <sup>1</sup> / <sub>2</sub>	0 1 7
Cheese ... „	0 0 7 <sup>1</sup> / <sub>2</sub>	0 0 9 <sup>1</sup> / <sub>4</sub>	0 0 10	0 1 0 <sup>1</sup> / <sub>4</sub>	0 1 3 <sup>1</sup> / <sub>4</sub>	0 1 0 <sup>1</sup> / <sub>4</sub>	0 0 10
Bacon ... „	0 0 9 <sup>3</sup> / <sub>4</sub>	0 0 11 <sup>1</sup> / <sub>2</sub>	0 1 0	0 1 1 <sup>1</sup> / <sub>2</sub>	0 1 6	0 1 4 <sup>1</sup> / <sub>4</sub>	0 1 0 <sup>1</sup> / <sub>2</sub>
Eggs ... doz.	0 1 1	0 1 0	0 1 2	0 1 9 <sup>1</sup> / <sub>2</sub>	0 1 11	0 1 10	0 1 7 <sup>1</sup> / <sub>2</sub>
Poultry—							
Fowls							
(Roosters)pr.	0 5 5	0 5 9	0 5 9	0 7 0	0 7 9	0 9 5	0 6 10 <sup>1</sup> / <sub>2</sub>
Ducks							
(English) „	0 4 5	0 4 9	0 4 9	0 5 10	0 7 4	0 8 11	0 6 10
Geese „	0 6 8	0 9 9	0 9 9	0 10 5	0 11 9	0 14 10	0 10 8
Turkeys							
(Cocks) „	0 11 2	0 15 6	0 17 6	1 5 8	1 15 8	1 17 11	1 16 7
Bee produce—							
Honey lb.	0 0 3 <sup>3</sup> / <sub>4</sub>	0 0 4 <sup>1</sup> / <sub>2</sub>	0 0 4 <sup>1</sup> / <sub>2</sub>	0 0 6 <sup>1</sup> / <sub>2</sub>	0 0 8	0 0 5 <sup>1</sup> / <sub>4</sub>	0 0 3 <sup>3</sup> / <sub>4</sub>
Wax „	0 1 2 <sup>1</sup> / <sub>4</sub>	0 1 6 <sup>1</sup> / <sub>4</sub>	0 1 10 <sup>1</sup> / <sub>4</sub>	0 2 0	0 2 0 <sup>1</sup> / <sub>2</sub>	0 1 11	0 1 8 <sup>1</sup> / <sub>4</sub>

Almost without exception prices increased in each year from 1914 to 1920, the greatest rises occurring in 1919 and 1920. In 1921 all the prices, except the quotations for poultry, were slightly lower than in the preceding year. In 1921 butter was 87 per cent. dearer than in 1914, bacon 72 per cent., eggs 71 per cent., and milk 77 per cent. dearer; but during 1922 prices generally fell to lower levels, although still very much above those ruling in 1914.

## FORESTRY.

THE forest lands of the State containing timber of commercial value consist of about 11 million acres, of which about 8 million acres are Crown lands. Nearly 7 million acres of State lands have been either dedicated or reserved for the preservation and growth of timber.

The total forest area, although not large, contains a great variety of useful timbers, which in hardwoods number about twenty different kinds of good commercial value, including such renowned constructional woods as iron-bark, tallow-wood, and turpentine, whilst in other timbers there are about twenty-five varieties, including such valuable timbers as cedar, beech, pine, and teak. It is estimated that, approximately, five-sixths of the timber supply consists of mixed hardwoods and one-sixth of soft and brush woods.

Following the report of a Royal Commission appointed in 1907, a Forestry Department was established under the Forestry Act, 1909. This Act was repealed by the Forestry Act, 1916, which became law on the 1st November, 1916, and provided for the constitution of a Forestry Commission, consisting of three members, one being Chief Commissioner.

The Commission is charged with the administration of the Forestry Act, 1916, which provides for the control and management of the State forests and timber reserves, for the training of forest officers, for the conduct of research work, and for the collection of statistics in connection with forestry.

The Commission may dispose of timber and products of any State forest or timber reserve, and—

- (a) take and sell such timber and products;
- (b) convert any such timber into logs, sawn timber, or any other merchantable article, and sell the same;
- (c) convert any such products into merchantable articles, and sell the same;
- (d) construct roads, railways, and tram-lines and other works for the transport of timber; and purchase, rent, or charter and use vehicles and vessels, with the necessary motive power;
- (e) construct, purchase, or rent sawmills and other mills, with all the necessary machinery and plant for converting timber, and manufacturing articles from timber, and use such mills for those purposes.

One-half of the gross amount received from royalties, licenses, and permits, and from the sale of timber, other than the output of the mills as indicated in (e) above, is to be set apart for afforestation, reafforestation, survey and improvement of State forests and timber reserves, and for purposes incidental thereto, except that the expenditure of an amount exceeding £5,000 on any particular work is subject to the approval of the Minister.

The Government may purchase, resume, or appropriate land for the purpose of a State forest, and may dedicate Crown lands as State forests or timber reserves.

Timber-getters' and other licenses may be issued by the Commission, and exclusive rights to take timber products from specified areas of State forest or timber reserves may be granted also.

Every person conducting a sawmill for the treatment of timber must obtain a license, keep books and records, and make prescribed returns. Royalty must be paid on all timber felled and on all products taken from any State forest, timber reserve, Crown lands, or lands held under any tenure from the Crown which require the payment of royalty; but such

royalty is not payable on timber exempted by terms of the license or by the regulations, or on timber required for use on any holding not comprised within a timber or forest reserve; allowance may be made also for any timber which is not marketable. Trees on any State forest, timber reserve, or Crown lands, with the exception of lands held under conditional lease granted before the passing of the Act, must not be ringbarked except under permit.

The Act provides for regulations on the following matters:—Licenses, etc., and the fees and royalties payable; the periods and the conditions under which licenses, etc., may be granted; the protection and preservation of timber; the inspection, cutting, marking, and removal of timber; the kinds, sizes, and quantities which may be cut or removed; the conditions under which fires may be lighted in State forests; and the organisation of a system of education in scientific forestry.

The Act provides also for the classification of forest lands and for proclamation of State forests; and survey work is in progress for this purpose.

"The Australian Forestry Journal" is issued monthly by the Commission with the object of interesting the public in forestry, and it is distributed gratis among a large number of public bodies.

A large amount of regenerative work has been done in connection with the Murray River and the inland forests. Experimental works have been started in various parts of the coast and highlands to test the capacity of different classes of hardwood forest for reafforestation, and to ascertain the best methods of treatment; and stations have been selected for the promotion of afforestation by the establishment of State nurseries, with the object of utilising some of the waste lands of the State, of which about 300,000 acres are suitable for the purpose.

On 30th June, 1922, the total area of Crown lands proclaimed as State Forests was 5,371,994 acres, and the area of timber reserves was 1,479,792 acres.

Particulars relating to the State forests and plantations and timber reserves as at the end of each of the last five years are shown below:—

Particulars.	1918.	1919.	1920.	1921.	1922.
State Forests—					
Number ... ..	660	695	706	721	736
Area ... acres	4,822,627	5,043,800	5,085,050	5,194,298	5,371,994
State Plantations—					
Area ... acres	644	1,052	1,448	2,544	4,032
Timber Reserves—					
Number ... ..	670	495	530	504	494
Area ... acres	2,216,447	1,846,927	1,746,069	1,535,679	1,479,792

The area of the timber reserves is being reduced rapidly, as arrangements are made to dedicate suitable reserves as State forests, in order that they may be reserved permanently for forestry purposes, while those reserves which are not adapted for forestry are made available for other uses.

#### *State Forest Nurseries and Plantations.*

A State Forest Nursery is maintained at Gosford for the propagation of plants of commercial types. The planted area is about 42 acres; exchanges of seeds and plants are made with similar institutions in various parts of the world. Branch Nurseries of various dimensions have been established in practically every forestry district in the State. The total area of effective plantations at the end of June, 1922, was 3,736 acres; in addition, about

1,200 acres had been prepared for planting, and there were 1,027,361 acres under working plans.

To supplement the supply of softwood in the State, afforestation is necessary on a more extensive scale than at present, it being estimated that the laying down of 5,000 acres per year for thirty years would be necessary to assure adequate supplies of local softwoods. Preliminary surveys in the southern highlands disclose an area of 150,000 acres suitable for the growth of softwoods and indigenous hardwood, and as this land is used only for summer grazing at present there is a possibility of extension in afforestation.

*Production and Consumption of Timber.*

During the year ended 30th June, 1922, there were in operation 466 licensed sawmills. The employees numbered 5,260, and the value of plant and machinery was estimated at £874,702. The output of native timber amounted to 143,593,000 superficial feet, valued at the mills at £1,900,611.

In the forests which have been placed under intensive management the Forestry Commission undertakes the conversion of many classes of forest produce in order to ensure that all saleable timber will be removed promptly from each area to make way for young growth. In these areas 14,653,000 superficial feet of timber were dealt with during 1921-22.

The following table shows the average annual output of native timber from sawmills in New South Wales in successive years since 1915, and for comparative purposes the gross consumption of native and imported timbers is shown for the past six years, as estimated by the Forestry Commission.

Year ended 30th June.	Annual Output of Native Timber from Saw Mills. (000 omitted.)	Estimated Gross Consumption of Timber.		
		Native.	Imported.	Total.
		(000 omitted.)		
	super feet.	super feet.	super feet.	
1915	140,940	*	*	*
1916	115,201	*	*	*
1917	125,243	261,000	125,976	386,976
1918	126,745	285,925	92,628	378,553
1919	131,617	291,225	86,687	377,912
1920	155,114	318,040	86,637	404,677
1921	156,112	352,882	96,666	449,548
1922	143,593	356,933	110,225	467,158

\* Not available.

The output of native timber from local sawmills increased rapidly in the years preceding the war, but owing to the disorganisation of shipping and of all business enterprise, the export trade declined and production decreased.

Since the war there has been a marked revival in the building trade, and the consumption of timber has increased rapidly in the past three years. Most of the imported timber consists of softwoods. The native timber consumed in 1921-22 consisted of 197,381,000 superficial feet of hardwood; 61,124,000 superficial feet of pine, 7,111,000 superficial feet of brushwood, and 91,317,000 feet of fuel.

*Value of Production from Forestry.*

The estimated value of production from forestry in 1921-22 was £1,585,000, as at the place of production. The following table shows the value of forestry production in New South Wales at intervals since the year 1901 :—

Year.	Value. (000 omitted.)	Year.	Value. (000 omitted.)
	£		£
1901	554	1918*	1,093
1906	1,008	1919*	1,306
1911	998	1920*	1,527
1916*	1,045	1921*	1,656
1917*	1,094	1922*	1,585

\* Year ended 30th June.

*Imports and Exports of Timber.*

The greater part of the softwood used in New South Wales has been drawn for many years from foreign sources of supply, among which New Zealand, the United States of America, and the countries bordering the Baltic Sea are most important. It is hoped, however, that eventually steps will be taken to plant extensive areas in New South Wales with high-class American and other softwoods in order to render the State independent of imported timbers.

In the following table particulars are shown regarding the import and export of timber to and from New South Wales at intervals since 1901. A rapid increase in imports proceeded until the outbreak of war, indicating that a growing demand existed locally for soft-woods. Though the forests of the State abound in high-class hard-woods, it is not probable that the export trade will ever assume large proportions.

Year.	Imports Oversea to New South Wales.				Exports of Australian Produce Oversea from New South Wales.			
	Undressed.		Other.	Total Value.	Undressed.		Other.	Total Value.
	Quantity.	Value.			Quantity.	Value.		
	sup. feet.	£	£	£	sup. feet.	£	£	£
1901	68,369,135	322,642	137,123	459,765	10,385,618	66,346	58,664	125,010
1906	84,771,918	444,563	81,850	526,413	29,321,865	325,805	9,361	335,166
1911	164,379,875	955,344	209,028	1,164,372	28,397,961	250,990	17,949	268,939
1915-16	119,232,376	814,102	74,305	888,407	15,098,981	144,486	10,965	155,451
1917-18	93,936,763	815,700	39,245	854,945	11,292,281	167,364	7,897	175,261
1918-19	83,187,747	1,089,288	56,580	1,145,868	8,613,784	126,135	9,820	135,955
1919-20	85,975,377	1,442,511	60,245	1,502,756	9,964,984	168,828	25,520	194,348
1920-21	93,303,145	1,904,064	174,910	2,078,974	23,202,315	447,653	17,072	464,725
1921-22	96,848,347	1,254,616	160,219	1,414,835	20,301,336	349,898	5,059	354,957

In addition there is a considerable movement of timber interstate by sea, complete records of which are not available. The quantity of timber imported at Sydney by Sea from other States in 1921-22 was 25,646,000 superficial feet, valued at £452,000.

Included in the value of other timber imported and exported are such items as staves, laths, shingles, spokes, etc., which are not sold in superficial feet. The total value of these items in 1921-22 amounted to £35,809 imports and £2,063 exports.

#### *Forestry Licenses and Permits.*

Licenses and permits are granted at nominal sums for the purposes of obtaining timber and fuel, grazing, sawmilling, ringbarking, and for the occupation of land. Considerable revenue, however, is gained from royalties on timber, agistment, and occupation fees, etc., which are chargeable in addition to the license and permit fees abovementioned.

The revenue collected by the State from timber licenses and from royalty on timber during each year since 1911 is given in the following table :—

Year.	Sales, Rents, Fees, etc.	Royalty on Timber.	Total.	Year.	Sales, Rents, Fees, etc.	Royalty on Timber.	Total.
	£	£	£		£	£	£
1911	11,153	79,165	90,318	1917†	9,136	58,137	67,273
1912	10,998	85,967	96,965	1918†	12,938	58,031	70,969
1913	12,251	85,362	97,613	1919†	26,705	70,887	97,592
1914*	6,593	39,531	46,124	1920†	52,001	95,040	147,041
1915†	11,365	76,021	87,386	1921†	76,141	114,601	190,742
1916†	8,701	59,406	68,107	1922†	104,235	113,607	217,842

\* Six months ended 30th June.

† Year ended 30th June.

Included in the above for 1921-22 are sales of converted and confiscated material, £75,597; and rents from leased lands, £20,510.

The practice of forestry in Europe and America has shown that greater expenditure by the Government means greatly increased profits, and there is reason for expecting increased revenue as the result of forest improvement in New South Wales, where timber grows more rapidly and to larger size.

Particulars of expenditure by the Forestry Department during the last five years are shown in the following table :—

Head of Expenditure.	1917-18	1918-19.	1919-20.	1920-21.	1921-22.
	£	£	£	£	£
Salaries, Travelling Expenses, etc. ...	48,396	52,830	55,662	60,085	64,941
Survey, Organisation, Afforestation, and Re-afforestation ... ..	27,527	65,319	71,196	113,507	119,513
Other ... ..	1,765	3,013	8,049	5,948	2,134
Total ... ..	77,688	121,162	134,907	179,540	186,588



## FISHERIES.

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THE waters along the coast of New South Wales contain numerous varieties of fish, but the fishing industry is being but slowly developed. The principal sources of the supply of marine fish are the coastal lakes and estuaries, the sea beaches and ocean waters, while Murray cod is obtained in the inland rivers. Fishermen generally confine their attention to the coastal lakes and estuaries.

The most extensive development may be expected in the ocean waters, where large shoals of deep-sea fish such as great tunnies, Spanish mackerel, bonito, mackerel, kingfish, tailor, salmon, and many other pelagic fishes travel in large shoals. There are also immense quantities of pilchards, sprats, and other "herring-kind," as well as sea garfish and others.

Crayfishing and the oyster industry also are capable of great development, and mussels could be farmed successfully in a way somewhat similar to oysters, and in many places where the oyster will not flourish. The expansion of the oyster industry depends to a certain extent upon a diffusion of the knowledge of successful oyster culture among oyster growers. Intense cultivation at Port Stephens has produced excellent results in recent years.

Whaling operations have been conducted intermittently, but it is considered that two shore stations with two steam whaling gunboats each could be maintained profitably on the coast of the State. The season begins in June and ends in November, though whales may be taken before and after that period.

### CONTROL OF THE FISHERIES.

Under the Fisheries Act, 1902, control of the fisheries of the State, previously administered by a Commission, was placed in the hands of a Board to supervise the industry, to carry out investigations likely to be of service, and to ensure observance of the regulations in regard to the dimensions of nets, closure of inland and tidal waters, net-fishing, and other such matters. Under an amending Act, in 1910, the Fisheries Board was dissolved and its powers vested in a Minister of the Crown, the Chief Secretary being charged with the administration of the Act.

#### *Fishing Licenses.*

Persons catching fish for sale in tidal or inland waters must be licensed, also boats used for this purpose, the annual fee being 5s., which is reduced to half that amount if the license is issued after 30th June and before 1st December.

The number of licenses granted to fishermen during the year 1922 were 3,385, and licenses were issued in respect of 1,761 fishing boats; the fees received amounted to £1,427.

#### *Oyster Leases.*

For the purposes of oyster-culture, tidal Crown lands below an approximate high-water mark may be leased at yearly rentals, determined by the Minister; the areas are classified as average, special, or inferior lands

The leases of average lands are for fifteen years, but may be renewed for a like period; no area upon which an aggregate rental of less than £5 per annum is payable may be leased to any person not already an oyster lessee.

Leases of special lands are granted for areas of special value after the land has been offered by auction or tender, and are subject to the same conditions as leases of average lands, but need not be confined to areas along the approximate high-water mark.

Leases of inferior lands are granted for a term not exceeding ten years, with the right of renewal for a further term of five years.

During the year 1922 applications for leases numbered 557, representing 128,075 yards of foreshore and 718 acres of off-shore leases; at the end of the year the existing leases numbered 4,028; the length of foreshores held was 1,094,300 yards; and there were deep-water leases to the extent of 1,661 acres. The deposits paid with the applications for leased areas were £1,267, while the rentals received during the year for leased areas were £8,283.

#### PRODUCTION FROM FISHERIES.

The most important kinds of fish marketed are snapper, bream, black-fish, whiting, mullet, jewfish, flathead, garfish, and Murray cod—a fresh-water fish; salmon, tailer, trevally, leather-jacket, gurnard, and others are gradually gaining favour in the local markets.

*Fish*.—Exclusive of fish marketed by the State Trawling Industry, the quantity consigned to Sydney and Newcastle markets during 1922 amounted to 12,951,319 lb., of which 180,777 lb. were condemned. In addition 229,320 lb. of fish were consigned from the Tweed River to Brisbane, and 1,344,000 lb. are recorded as having been sold in various fishing centres in coastal areas, but these figures are incomplete.

As usual the bulk of the supplies came from the estuaries and lakes on the northern part of the coast-line. A small proportion, chiefly snapper, came from the ocean, this being obtained principally by long-line fishing. The main sources of the fresh fish supply during 1922 are indicated below:—

	lb.		lb.
Clarence River ... ..	3,015,998	Port Stephens ... ..	540,665
Wallis Lake ... ..	1,307,439	Botany Bay ... ..	465,051
Lake Macquarie ... ..	934,419	Manning River ... ..	418,678
Lake Illawarra ... ..	894,823	Richmond River ... ..	367,423
Camden Haven ... ..	754,456	Macleay River ... ..	339,414
Tuggerah Lakes ... ..	614,505	Wollongong ... ..	311,471
Hawkesbury River ... ..	574,589	St. George's Basin ... ..	242,875

Notwithstanding the immense shipping development and consequent increase of traffic, and the large reclamation of foreshores in recent years, it is of special interest to note that the marketed production from Port Jackson was as much as 197,009 lb. The actual production was very much greater, because a considerable quantity was sold in the suburbs of Sydney without passing through the markets.

The total production of fish, as recorded during 1922, was slightly under 20,000,000 lb., of which nearly 5,500,000 lb. were marketed by State trawlers.

*Crayfish*.—The number of marine crayfish (*Palinurus*) marketed during 1922 was 86,280; the number captured was very much greater, but many were lost by death before marketing, and 1,272 were condemned. The principal source of supply was the northern crayfish grounds, from Newcastle to Port Macquarie. From Port Stephens alone over 21,324 were marketed.

*Prawns.*—A quantity of approximately 340,698 lb. of marine prawns (*Penaeus*) was marketed during 1922, about 2,990 lb. were condemned. These figures do not include prawns sold for bait.

*Crabs.*—About 2,331 dozen of crabs were marketed. These comprised several species of swimming crabs, notably the Blue (*Lupa*) and the Mangrove (*Scylla*).

*Oysters.*—During the year 1922 the oyster production of the State amounted to 24,811 sacks of the Rock oyster (*Ostrea cucullata*). This output was principally the result of artificial cultivation.

#### Value of Production.

The value of the production from fisheries of New South Wales, as recorded during the year ended 30th June, 1922, was approximately £538,466, made up as follows:—

Fresh Fish—				£	
State Trawling Industry	5,404,680 lb.	...	...	101,337	
Other	...	...	...	88,648 baskets	} 338,265
	8,211,723 lb.	...	...	...	
Crayfish	...	...	...	5,389 dozen	10,718
Prawns...	...	...	...	3,134 baskets	} 12,409
	163,784 lb.	...	...	...	
Crabs	...	...	...	453 baskets	} 1,304
	1,136 dozen	...	...	...	
Oysters	...	...	...	24,811 sacks	74,433
Total Value				...	£538,466

This amount, £538,466, is exclusive of the value of fish condemned, or sold in fishing and other centres and not recorded, or used for fertiliser and oil, the value of molluscs other than oysters, and of the products of whale and dolphin fisheries.

The value of fish, fresh and preserved, imported into the State of New South Wales during 1922 was £489,121; as against this the value of exports was £39,386, comprising re-exports (tinned, potted, etc.) and fresh and smoked fish for ships' stores.

The following table shows the value of production from fisheries since the year 1911:—

Year.	Value. (000 omitted).	Year.	Value. (000 omitted).
	£		£
1911	197	1918*	307
1912	220	1919*	335
1913	270	1920*	470
1915*	237	1921*	491
1916*	325	1922*	538
1917*	303		

\* Year ended 30th June.

## STATE TRAWLING INDUSTRY.

An account of the State Trawling Industry appears in previous issues of this Year Book. Owing to the heavy losses incurred and the impossibility of disposing of the large quantities of fish caught, even at low prices, operations were brought to a close at the end of February, 1923. By August of that year four of the seven trawlers had been sold, two to local firms, who are now operating along the coast, and two to buyers in New Zealand.

## FISH PRESERVING.

The fishes especially suitable for treatment by canning, smoking, or salting include pilchard, sandy sprat, anchovy, tailer, samson fish, cow-nyung kingfish, trevally, mackerel, bonito, little tunny, southern tunny, and Spanish mackerel. Canneries have been established at various times in New South Wales, but the irregularity of supplies under present conditions, together with certain climatic disadvantages, militated against their success.

## FISH CULTURE AND ACCLIMATISATION.

Acclimatisation of non-indigenous fishes, particularly trout, has met with success in New South Wales. Californian rainbow trout have been introduced in all suitable streams. Trout fishing now constitutes an important attraction for tourists and sportsmen in the districts watered by the Murrumbidgee and Snowy Rivers and their tributaries, and in the New England and Western mountain districts. A trout hatchery is maintained at Prospect, and considerable numbers of young fry are distributed annually.

## RURAL SETTLEMENT.

### *Spread of Settlement.*

SOME knowledge of the history of settlement in New South Wales is necessary to a proper understanding of the position now existing in regard to rural settlement. Population spread very slowly during the first forty years which succeeded the foundation of the colony. Settlement was at first confined to coastal lands accessible from Sydney, and it was not until 1813 that a way was found across the Great Dividing Range to the fertile plains of the west. But even after that discovery population was not sufficient for some years to promote a rapid spread of settlement despite the growing flocks of sheep which required new pastures. Even by 1830 the area settled did not extend more than 200 miles in any direction, and the boundaries within which settlers were allowed to select land embraced only 22,083,000 acres. But the steady infiltration of population, which occurred after 1815, placed an increasing strain upon the capacity of the settled region to supply a ready livelihood, and with the arrival of assisted immigrants in increasing numbers after 1828, certain bold and lawless spirits occupied extensive lands with their sheep beyond the arbitrary legal boundaries, in defiance of authority. This practice was termed "squatting."

Such occupation was at first illegal for another reason, namely, that until 1831 the use of land could be obtained only by grant from the Governor on special conditions. Unsuccessful attempts were made to dispossess the "squatters" until 1832, when their right to remain was recognised, and grazing leases were granted at fixed rentals. At the same time an Imperial Act of 1831 provided for the sale of Crown lands in the colony at a fixed price of 5s. per acre with a nominal quit-rent. Thus the way was cleared for rural settlement. The rapid flow of immigrants continued, and a boom in settlement, with the attendant evils of land traffic, resulted. This boom did not end until the price of Crown land had been raised to 12s. per acre in 1839, and further to 20s. per acre in 1842 (where it remained until 1895). The system of free grants was terminated in 1840. By that year nearly 6,000,000 acres of land had been alienated, of which approximately one-third had been sold. In addition extensive areas were occupied as grazing leases.

The system of selling land was replaced by that of leasing, and a more rapid spread of settlement began. Under this system the State was divided arbitrarily into three districts—settled, intermediate, and unsettled—which remained until 1884. Leases were granted upon tender for areas of 25 square miles in the intermediate districts and 50 square miles in the unsettled districts. The grant in the intermediate districts carried the right to purchase 1 square mile in every 25 square miles leased. Under this system, practically the whole of the State was speedily occupied in extensive "runs," for the possession of which competition, not without malpractices, was very keen.

Despite the steady flow of immigration the population numbered only 178,668 in 1851, when the gold rushes commenced, bringing a rapid influx of population. By 1861 the gold fever was subsiding, and the number of

inhabitants of the State had increased to 357,978. Men now began to seek anxiously for land on which to settle, and found it occupied in extensive runs held on lease and not available for purchase, except by the holders, in limited areas. The remedy applied by Parliament was expressed in the famous principle "free selection before survey," introduced in 1861. Very grave abuses arose in the bitter conflict which resulted between the competitors for land, and holdings were selected without classification and regardless of public interest. But a real development of rural settlement now occurred, and, before the Act expired in 1884, the population had reached 904,980, the State was occupied in pastoral holdings of varying sizes and began rapidly to assume importance as a principal source of the wool supply of the world. More than 35,000,000 acres had been alienated—of which 28,000,000 were sold between 1861 and 1884—and practically the whole of the remaining area of the State suitable for occupation was leased definitely for varying periods.

#### *The Land Problem.*

The nature of the demand for land now changed. A decline in the prices realised for wool, the rise of wheat-growing for export, and the growth of the dairying industry and mixed farming to supply oversea markets with butter and mutton, after the application of refrigeration to sea cargoes, led to a new and more intense development in rural settlement. In view of the large areas of lands alienated and leased a difficult problem arose to which the Legislature has since devoted a large amount of attention.

Practically the whole State was occupied for the most part in large holdings on more or less stable tenures, and the problem of development assumed the form of re-settlement.

The State was divided into three new districts—Eastern, Central, and Western—and into Land Board districts in 1884 for purposes of administration. In 1895 the principles of classification of lands, survey before selection, one man one selection, and *bona fide* selection were introduced. Special provision for financial assistance to settlers was made in 1899, and in 1903 the closer settlement policy was entered upon whereby the State repurchased suitable lands, subdivided them, and sold "living areas" to settlers on easy terms. The Murrumbidgee irrigation project was initiated in 1906, aiming to provide more than 5,000 farms.

Meanwhile alienation of Crown lands continued. In 1912 certain leasehold tenures were introduced, but, in 1916, the right to convert certain leases into freehold tenures was extended. By June, 1922, between 80,000,000 and 90,000,000 acres of land had passed out of control of the Crown, in addition to extensive areas leased for long terms. The experience of settlers in the Western Division has been such that very little of that immense area comprising 80,368,498 acres may be considered available for intensive settlement. The total area of the State is 198,638,080 acres, and, excluding the large reserves for public purposes, lands unfit for occupation, and the area occupied by water, towns, roads, and railways a suprisingly small area of land within range of practical rural settlement now remains within the disposal of the Crown.

#### *Land Policy of the Government.*

In January, 1923, the Government, after systematic investigation, prepared a scheme of rural development and put the following policy into operation:—

1. Crown Lands.—All available Crown lands are to be opened for settlement classified under the following headings:—Grazing, Mixed Farming,

Wheat-growing, Dairying, and Fruit and Vegetable Growing. Such classification is to take into account soil, market, and transport facilities and markets for products.

2. Land within Reach of Railways.—There are 34,000,000 acres of land within about 12 miles of certain railways in the wheat belt; of this area approximately 24,940,000 acres are alienated, and of this alienated land 12,058,000 acres are considered suitable for cultivation, but only 3,455,300 acres were under crop in 1921–22.

It is proposed by the Government to assist holders of large areas voluntarily to subdivide should they propose to do so within a given time, failing which it is possible that powers of taxation and resumption to attain the object of closer settlement, will be used.

In the area mentioned there were at 30th June, 1922, 709 holdings exceeding 5,000 acres in area, embracing in all 9,655,000 acres of alienated land, of which 3,392,000 were considered suitable for cultivation, and 312,000 acres were under crop.

3. Developmental Railways.—Six developmental railway lines are in course of construction or recently completed costing £2,014,000. These provide access to 1,693,000 acres of Crown Lands and 3,170,000 acres of alienated land partly covered by proclamation. It is estimated that 600 new settlers will be placed on these Crown Lands and that there is room for 1,000 more on the alienated lands in question.

4. Irrigation Settlements.—Contingent upon market difficulties being overcome, projects approved will provide 4,000 additional irrigation farms on the Murrumbidgee and Murray rivers. New areas are to be opened up at Gol Gol, Nine Mile, and Lake Benance on the Murray, and when these have been developed successfully it is anticipated that from 5,000,000 to 10,000,000 acres of land in the vicinity will become available for dry-farming. Private irrigation projects are to be encouraged.

Full inquiry is to be made into the proposals for water conservation in connection with the Lachlan, Macquarie, Namoi, Peel, Hunter, and War-ragamba rivers.

5. Applicants for Land are to be registered and classified with particulars of their requirements.

6. Rural Finance.—A scheme of rural finance is to be inaugurated (see page 696).

7. Rural Reforms.—More agricultural advisers and schools are to be provided; improvement of telephone services; provision of rural credit schemes, conservation of fodder and encouragement of co-operation; improvement of dairy herds; and initiation of hydro-electric schemes.

In September, 1923, the number of persons registered as applicants for land in New South Wales in accordance with the Government scheme was 2,500.

#### RURAL HOLDINGS.

As already indicated, the land of New South Wales is practically all occupied in rural holdings consisting either of alienated lands, lands in course of alienation, leased Crown lands, or various combinations of these tenures, while a considerable area remains as Crown reserves. At 30th June, 1922, the number of holdings of 1 acre or more in extent used for agricultural and pastoral purposes was 79,218, including 954 unoccupied and 2,681 used only incidentally for agricultural and pastoral purposes. These holdings embraced a total area of 172,391,000 acres. At the same date the total area of alienated and leased land in the State was 176,524,000 acres, the

difference consisting of approximately 2,355,000 acres of alienated land and 1,778,000 acres of leased land held in areas of less than one acre, or not used for agricultural and pastoral purposes.

The area of land neither alienated nor leased from the Crown—18,543,281 acres—does not represent the area of unoccupied land available for settlement. It includes the land unfit for occupation of any kind—estimated to be approximately 5,000,000 acres in extent—land embraced in State forests and not otherwise occupied; unoccupied reserves for necessary public purposes such as commons, travelling stock, and water reserves; roadways, railway enclosures, and unoccupied land covered by water or too rugged or arid for occupation. Such lands are situated mainly in the coastal and tableland divisions, but smaller proportions are found in all divisions.

*Purposes for which Holdings are Used.*

The problem of rural development in New South Wales relates largely to the task of settling men permanently on the land as productive units of the population. In addition to human factors, this problem is complicated by the variations of seasons and by markets, which determine largely the profitableness of rural pursuits. An approximate classification of the main purposes for which rural holdings of 1 acre and upwards were used is available for each year since 1908, and provides the following comparison which shows the nature of rural settlement:—

Main purpose for which holdings are used.	Number of Holdings.				
	1908.	1910-11.	1915-16.	1920-21.	1921-22.
Agriculture only ... ..	7,244	6,814	10,856	11,032	11,468
Dairying only ... ..	3,575	3,157	6,074	7,738	9,092
Grazing only ... ..	21,874	22,011	23,497	27,170	25,438
Agriculture and Dairying ... ..	8,377	8,258	5,641	5,112	5,214
Agriculture and Grazing ... ..	18,733	21,969	20,895	19,336	18,758
Dairying and Grazing ... ..	1,818	2,099	1,402	2,271	2,342
Agriculture, Dairying, and Grazing ... ..	3,312	4,362	1,537	1,549	1,818
Poultry, Pig, or Bee Farming ... ..	529	879	1,256	1,348	1,453
Total Holdings of 1 acre and upwards used mainly for Agricultural and Pastoral purposes ... ..	65,462	69,549	71,158	75,556	75,583

In addition, a considerable number of small holdings—usually less than 30 acres in extent—were used partly for agricultural and pastoral purposes, but mainly for residential and other purposes, or were unoccupied at the time of collecting the returns.

While the above table does not indicate the actual number of settlers occupying the land—because some holdings are held conjointly, and not a few settlers own more than one holding—the figures quoted may be considered a reliable index of the development of settlement.

Despite seasonal variations a marked increase is apparent in the number of holdings used exclusively for each of the main pursuits, but the growth has been most marked in the case of dairying and agriculture. Grazing is still the predominant rural activity, but mixed farming, agriculture, and dairying are also of great importance.



*Size of Holdings.*

Information regarding the size of rural holdings is available in two distinct classifications, one in accordance with the size of the alienated area, and the other in accordance with the total area of alienated and Crown land contained in each holding.

The following table shows in area series as at the 30th June, 1922, the alienated area of holdings and of the Crown lands attached, classified according to the size of the privately-owned land.

Area of Holding alienated.	Number of Alienated Holdings.	Area Occupied.			Proportion in each area group.	
		Alienated.	Crown Lands Attached to Alienated.	Total.	Holdings.	Alienated Land.
acres.		acres.	acres.	acres.	per cent.	per cent.
1— 50 ..	15,180	340,947	1,550,078	1,891,025	21·0	0·6
51— 100 ...	7,728	598,784	1,110,104	1,708,888	10·7	1·0
101— 500 ...	26,455	6,924,701	12,781,391	19,706,092	36·7	11·1
501— 1,000 ..	11,087	7,802,003	13,526,556	21,328,559	15·4	12·6
1,001— 3,000 ...	8,339	13,770,808	21,064,813	34,835,621	11·6	22·2
3,001— 5,000 ...	1,456	5,583,152	10,027,637	15,610,789	2·0	9·0
5,001— 10,000 ...	1,096	7,523,852	8,123,713	15,647,565	1·5	12·1
10,001— 20,000 ...	503	6,846,347	6,841,262	13,687,609	0·7	11·0
20,001— 50,000 ...	219	6,356,816	3,753,607	10,110,423	0·3	10·2
50,001—100,000 ...	50	3,508,172	711,279	4,219,451	0·1	5·6
Over 100,000 ...	22	2,862,889	1,500,499	4,363,388	...	4·6
Total*...	72,135	62,118,471	50,990,939	143,109,410	100·0	100·0

\* Exclusive of 7,083 holdings, embracing 29,281,405 acres of Crown lands only.

Owing to the wide variations between the productivity of the various divisions and even of parts of the same division, the size of holdings by itself is an indication only of the intensity of settlement and does not measure in a reliable manner the scope for increased settlement. The above-table, therefore, does not show how far the existence of large alienated holdings is impeding settlement. For such a purpose it would be necessary to consider the quality of the holdings concerned, the rainfall, situation in respect of market and transport facilities, and other matters which determine the productivity and profitable use of land.

It is clear, however, that the number of holdings in excess of a living area is very considerable and that they embrace a very large area of land. This is apparent from the fact that the maximum areas allowed for residential conditional purchases are 1,280 acres in the Eastern Land Division and 2,560 acres in the Central Land Division, the minimum being 40 acres in each case.

The following table shows for each statistical division of the State the number and area of holdings in area series, based on the aggregate area of alienated and Crown land in each holding. The boundary between the

Eastern and Central Land Divisions passes through the Western Slopes Division as shown on the map in the frontispiece of this Year Book :—

Size of Holding (Alienated and Crown Lands Combined).		Number and Area of Holdings in Divisions.					
		Coastal.	Tablelands.	Western Slopes.	Plains and Riverina.	Western Division.	Whole State.
Acres.							
Under 51 .....	{ No. ...	9,719	2,623	2,181	1,521	229	16,273
	{ Acres	203,914	65,222	54,959	34,439	4,030	262,504
51- 100 .....	{ No. ...	4,697	1,379	975	395	41	7,487
	{ Acres	368,034	105,827	73,047	29,279	3,435	579,622
101- 500 .....	{ No. ...	13,670	4,732	4,290	2,401	80	25,182
	{ Acres	3,202,504	1,278,470	1,311,106	772,642	20,909	6,585,631
501- 1,000 .....	{ No. ...	2,585	2,694	3,164	3,108	73	11,024
	{ Acres	1,805,602	1,930,337	2,226,890	2,230,933	50,193	8,252,955
1,091- 3,000 .....	{ No. ...	1,710	3,243	3,250	3,187	83	11,478
	{ Acres	2,734,163	5,453,272	5,600,679	5,705,804	134,621	19,628,539
3,001- 5,000 .....	{ No. ...	253	672	728	1,098	38	2,787
	{ Acres	972,650	2,546,318	2,784,704	4,307,930	157,642	10,769,244
5,001-10,000 .....	{ No. ...	149	388	486	1,007	116	2,146
	{ Acres	1,022,986	2,678,199	3,287,690	6,692,789	889,926	14,571,581
10,001-20,000 .....	{ No. ...	58	182	174	364	281	1,059
	{ Acres	772,042	2,411,971	2,425,937	4,945,086	3,876,114	14,431,150
20,001-50,000 .....	{ No. ...	30	77	68	210	364	749
	{ Acres	926,862	2,199,878	1,924,218	6,481,298	11,119,767	22,652,023
Over 50,000 .....	{ No. ...	8	17	12	109	287	433
	{ Acres	904,784	1,221,292	1,078,248	10,330,937	61,022,223	74,557,476
Total ... { No. ...		32,879	16,012	15,335	13,400	1,592	79,218
	{ Acres	12,913,541	19,899,777	20,767,470	41,531,137	77,278,890	172,390,815
Total Area of Division ... Acres		22,355,401	25,831,246	24,251,881	45,827,854	80,368,498	198,634,880

Approximately 48,940, or 62 per cent. of the rural holdings of the State are less than 500 acres in extent, and occupy only 7,528,000 acres, or 4.4 per cent. of the total area used for agricultural and pastoral purposes. Of these 28,086 are in the coastal districts, 8,734 in the Tablelands Division, 7,455 in the Western Slopes, 4,317 on the plains of the Eastern Division, and 350 in the Western Division. Eighty-five per cent. of the holdings in the Coastal Division are less than 500 acres in extent, but they embrace less than 30 per cent. of the area occupied by rural holdings.

Holdings which exceed more than twice the maximum area prescribed for residential conditional purchases may be considered for purposes of discussion as large holdings. Their suitability for subdivision could be determined only after individual consideration. Holdings exceeding 3,000 acres in extent number 498 in the Coastal Division and embrace 4,599,324 acres, and in the Tableland Division 1,336, embracing 11,057,649 acres. On the Western Slopes there are 740 holdings exceeding 5,000 acres in area, embracing a total of 8,716,085 acres of land, and on the plains of the Central land division (including the Riverina) 1,690 such holdings, embracing a total of 28,450,110 acres. Thus, in the Eastern and Central land divisions 55 per cent. of the total area occupied is contained in 5.5 per cent. of the holdings. Practically the whole of the land of the Western Division is occupied by 932 holdings, exceeding 10,000 acres in extent, and embrace 76,018,104 acres; of this area 53,740,652 acres are comprised in holdings exceeding 100,000 acres in area.

#### *Number of Holdings and Average Area.*

In the past sixty years land legislation in New South Wales has been directed principally towards producing an increase in the number of land

holdings, and, at the same time, efforts have been made to discourage the aggregation of large areas under individual owners; for, when settlers had spread throughout the State, the existence of large estates began to prove an obstacle to further development.

Since the first Crown Lands Act was passed in 1861 the Legislature has been frequently occupied with the problem of rural development, but only limited success has been achieved in promoting fresh settlement. Many varieties of tenure have been devised, but none has been found capable of populating effectively the vast tracts of land in the interior. Large holdings over 5,000 acres in extent have increased, and far more land has been alienated than is necessary to maintain the number of settlers actually remaining upon it.

The whole story of rural settlement in recent years may be summed up as follows:—Between 1861 and 1920 the number of original selections made was approximately 131,730, and this number does not include such holdings as Suburban, Returned Soldiers' Special, Residential on Goldfields, and Irrigation Farms, which are generally small in extent. At the last-named date there were in existence 61,794 alienated holdings over 30 acres in area. Allowing for the number of holdings already in existence in 1861 and remaining in existence in 1920, and for the inclusion in the number of original selections of some less than 30 acres in extent, it is clear that more than half of the individual selections made during the period have been disposed of and combined into large holdings either for the profit accruing from the sale, or through the financial or other disabilities of the original selectors.

Omitting holdings of less than 30 acres in extent, which are not important in relation to rural settlement, it is possible to trace from 1881 the development of land alienation and the increase in the number of holdings in relation to the growth of population. This is shown in the following table:—

Year.	Alienated Holdings—over 30 acres.			Area wholly or partly placed beyond State control. (See page 702.)	Mean Population.
	Number.	Area.	Average Area.		
		acres.	acres.	acres.	
1881	32,521	27,791,076	855	35,293,625	765,015
1891	38,706	41,046,249	1,060	63,437,899	1,142,025
1901	48,360	45,869,742	948	76,479,542	1,366,900
1911	57,089	51,943,846	910	79,546,538	1,665,265
1916	60,435	56,047,062	927	83,166,087	1,893,479
1921	61,505	61,003,468	992	85,883,329	2,108,369
1922	61,983	61,986,372	1,000	87,173,975	2,150,862

Many of the holdings enumerated above have areas of Crown leases attached to them, but the areas shown relate to alienated land only. Where two or more holdings are owned by the same person they are enumerated separately.

The development of alienation has been slower since 1901 than previously. The relative growth of settlement, alienation, and population may be readily

illustrated by reference to index-numbers in which, in each case, the year 1901 is chosen as base and called 100 :—

Year.	Index of Alienated Holdings—over 30 acres.			Index of Area wholly or partly placed beyond State control.	Index of Mean Population.
	Number.	Area.	Average Area.		
1881	67	61	90	46	56
1891	80	90	112	83	84
1901	100	100	100	100	100
1911	118	113	96	104	122
1916	125	122	98	109	138
1921	127	133	105	112	154
1922	128	135	105	114	157

Until 1901 the area of land placed beyond State control increased as rapidly as population increased; but since 1901, largely owing to the exhaustion of alienable lands, the population has grown at a faster rate. It is also very significant that the population has grown at a much faster rate throughout than the number of alienated holdings. This fact is an enlightening commentary on the drift of population from rural to urban settlements.

The number of alienated holdings has increased at a slower rate than the area alienated, and the number of large holdings of alienated land has increased markedly during the past forty years. The increase, however, has not been uniform, and assumed a new phase in 1912, after the imposition of the Federal Land Tax. The following table which relates to individual holdings without regard to ownership, shows the number and area of the larger alienated holdings at intervals since 1891 :—

Year.	Number of Alienated Holdings of—			Area of Alienated Holdings of—		
	5,000 to 20,000 acres.	Over 20,000 acres.	Total, Over 5,000 acres.	5,000 to 20,000 acres.	Over 20,000 acres.	Total, Over 5,000 acres.
1891	865	320	1,185	acres. 8,459,384	acres. 16,129,163	acres. 21,588,547
1901	938	357	1,295	9,286,972	17,203,765	26,490,737
1911	1,081	362	1,443	9,873,180	16,560,215	26,433,395
1921	1,558	301	1,859	13,935,997	12,949,858	26,885,855
1922	1,599	291	1,890	14,370,199	12,727,877	27,098,076

The Federal Land Tax (particulars of which are published on page 57 of this Year Book) was first imposed in 1910 upon so much of the unimproved value of lands owned by residents of Australia as exceeded £5,000, and upon all lands owned by absentees. The value of land in New South Wales owned by absentees is negligible, and the assessed value of lands held on lease from the Crown is relatively of small account. The incidence of the tax, therefore, has fallen mainly upon large alienated holdings.

Up to 1911 the increase in the number of large alienated holdings had progressed fairly regularly, but in 1912 there was a decrease from 362 to 335 in the number of alienated holdings exceeding 20,000 acres in area, and an increase from 1,081 to 1,201 in the number between 5,000 acres and 20,000 acres in extent. This change did not produce any reduction in the total area of alienated land contained in these large holdings and, although

the number and area of alienated holdings containing more than 20,000 acres have continued to decline at an appreciable rate, the diminution has been offset by an increase of 120 in the number, and 4,497,000 acres in the area of alienated holdings between 5,000 acres and 20,000 acres in extent. The total area of alienated land embraced in holdings exceeding 5,000 acres in area was almost stationary between 1901 and 1911, but since 1911 it has increased by nearly 665,000 acres.

*Tenure of Holdings.*

The tenure of land-holdings in New South Wales is principally of two classes—freehold and leasehold from the Crown. Only a small proportion of the total area occupied (approximately 2·1 per cent.) is rented from private owners, although the area held on lease from the Crown is very large. Tenancy, as understood in older countries is, therefore, of small extent; 94·1 per cent. of the total area alienated is occupied by its owners.

The following table shows the area occupied in each Division of New South Wales, according to the class of tenure :—

Division.	Area of Alienated Holdings.			Crown Lands Leased.		Total Area in Holdings.
	Occupied by Owner.	Private Rented.	Total.	Attached to Alienated Holdings.	In Separate Holdings.	
	acres.	acres.	acres.	acres.	acres.	acres.
Coastal ... ..	8,092,331	1,282,926	9,375,257	3,040,497	497,787	12,913,541
Tableland ... ..	11,351,575	760,427	12,112,002	6,590,332	1,197,443	19,899,777
Western Slopes ... ..	14,369,930	655,778	15,025,708	4,127,199	1,614,563	20,767,470
Central Plains and Riverina ... ..	22,821,696	931,582	23,753,278	11,733,025	6,044,834	41,531,137
Western ... ..	1,814,701	37,525	1,852,226	55,490,886	19,926,778	77,278,390
New South Wales ... ..	58,450,233	3,668,238	62,118,471	80,900,639	19,281,405	172,390,815

Of the total area occupied, 36 per cent. was freehold, and 64 per cent. was leased from the Crown. Nearly 70 per cent. of the Crown lands so leased were in the Western Division, and utilised almost exclusively for depasturing stock.

More than one-third of the land privately rented is situated in the Coastal Division, where it amounts to nearly 10 per cent. of the total area occupied in holdings. These farms are used chiefly for dairying, and the system of renting was subjected to adverse criticism in the report of the Select Committee of Inquiry into the Agricultural Industry in 1921.

The proportions of the total area of the respective Divisions, occupied in holdings of various classes are shown in the following table :—

Division.	Area of Alienated Holdings.			Crown Lands Leased.		Total Area in Holdings.
	Occupied by Owner.	Private Rented.	Total.	Attached.	Separate.	
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Coastal ... ..	36·20	5·74	41·94	13·60	2·23	57·77
Tableland ... ..	43·95	2·94	46·89	25·51	4·64	77·04
Western Slopes ... ..	59·25	2·70	61·95	17·02	6·66	85·63
Central Plains and Riverina ... ..	49·50	2·03	51·53	25·60	13·19	90·62
Western ... ..	2·26	·04	2·30	69·06	24·79	96·15
New South Wales ... ..	29·42	1·85	31·27	40·77	14·74	86·78

Slightly less than 87 per cent. of the total area contained within the boundaries of the State is occupied in holdings of one acre and upwards, used for agricultural or pastoral purposes. The highest proportion of absolute alienation, 62 per cent. of the area of the Division, has taken place in the

Western Slopes, and the lowest, 2·3 per cent., in the Western Division, but taking the total area of holdings, the Western Division shows the largest proportion of its area—96·2 per cent.—under occupation; the proportions are high also in the Central Plains and Riverina, 90·6 per cent., and in the Western Slopes, 85·6 per cent.

If reference be made to the table on page 672 it will be seen that, contrary to expectation, the proportion of unoccupied lands in each division decreases as the intensity of settlement decreases; at the same time it is apparent that the density of settlement bears an approximate relationship to physical configuration and average rainfall. While the greater intensity of settlement in the more easterly districts necessitates the allocation of larger proportions of land for public purposes, it is undeniable that a very considerable proportion of the remaining Crown land in the eastern division is so rugged or wooded as to be unfit or unprofitable for occupation. This is especially the case in the South Coast Division, which in parts is very mountainous, only 45 per cent. of the total area being occupied, as compared with 70 per cent. in the North Coast Division and 61 per cent. in the Hunter and Manning.

#### *Crown Land Holdings.*

Crown lands are held, as has been explained, either in conjunction with alienated land or as separate holdings. The total area held in conjunction with alienated lands is shown above. Particulars of holdings consisting of Crown lands only are as follow :—

Division.	Number of Holdings.	Area held.	Average area of Holdings.
		acres.	acres.
Coastal ... ..	611	497,787	814
Tableland ... ..	1,136	1,197,443	1,054
Western Slopes ... ..	1,037	1,614,563	1,557
Central Plains and Riverina ...	3,393	6,044,834	1,781
Western... ..	906	19,926,778	21,994
New South Wales ... ..	7,083	29,281,405	4,134

It will be observed that the average area of the holdings is comparatively small in the Eastern and Central Land Divisions. In the Western Division, intense settlement has not yet been found practicable, and the area of holdings consisting of Crown lands only is very large.

#### VALUE OF ALIENATED RURAL LANDS.

Particulars of the improved and unimproved capital values of the freehold lands contained in agricultural and pastoral holdings were first collected in 1920-21. The unimproved capital value was defined as being the amount which the land might be expected to realise if sold under such reasonable conditions as a *bona fide* seller would require, assuming that the actual improvements had not been made, and the improved capital value as the value of the land with all improvements and buildings thereon under similar conditions of sale. Where particulars of unimproved value were not available from owners, collectors were instructed to obtain them from the records of Shire Councils, and it is probable that local government assessments were returned as the unimproved value of the whole of the lands, except in the Western Division, where no shires exist.

Where valuations have been made by the Valuer-General it has been found that valuations formerly made for local government purposes were below actual values. In many cases the discrepancy was considerable, and in the aggregate the valuations of shires are probably under-estimated by more than 20 per cent. Since municipal lands are of comparatively small extent and very few shires assess improved values, particulars of improved capital value were obtained from the owners, and may be considered a fairly correct statement of the actual improved value of the land in question. The unimproved and improved values as returned, therefore, are not comparable because they are apparently stated upon different bases and represent respectively the shire assessment of the unimproved value of the land and the owner's opinion of the value of the land and its improvements. The value of improvements cannot be deduced from them.

The following table shows in divisions of the State the distribution of alienated and Crown lands occupied in holdings of one acre and upwards for agricultural and pastoral purposes, together with total and average value of the alienated lands at 30th June, 1922 :—

Division.	Area of Alienated Land in Occupation in Holdings over 1 acre in extent.	Unimproved Capital Value of Land.		Improved Capital Value.		Area of Crown Land.
		Total.	Average per acre.	Total.	Average per acre.	
	Acres. 000.	£000.	£	£000.	£	Acres. 000.
<i>Coastal—</i>						
North Coast ...	2,574	9,761	3·8	30,871	12·3	1,233
Hunter and Manning ...	4,723	10,440	2·2	30,224	6·4	1,600
Metropolitan ...	366	3,241	8·9	7,485	20·5	3
South Coast ...	1,712	4,199	2·5	11,197	6·5	702
Total ...	9,375	27,641	2·9	79,777	8·5	3,538
<i>Tablelands—</i>						
Northern ...	3,817	5,421	1·4	13,743	3·6	3,426
Central ...	4,109	6,318	1·5	17,567	4·3	2,028
Southern ...	4,186	5,133	1·2	14,196	3·4	2,334
Total ...	12,112	16,872	1·4	45,506	3·8	7,788
<i>Western Slopes—</i>						
North ...	5,787	10,412	1·8	23,539	4·1	2,986
Central ...	3,645	5,686	1·6	17,249	4·7	1,508
South ...	5,594	10,216	1·8	30,274	5·4	1,248
Total ...	15,026	26,314	1·8	71,062	4·7	5,742
<i>Plains—</i>						
North-central ...	3,371	4,025	1·2	7,888	2·3	4,791
Central ...	7,048	7,456	1·1	18,240	2·6	8,050
Riverina ...	13,334	20,229	1·5	47,071	3·5	4,937
Total ...	23,753	31,710	1·3	73,199	3·1	17,778
<i>Western Plains</i> ...	1,852	905	0·5	2,404	1·3	75,426
<i>Whole State</i> ...	62,118	103,442	1·7	271,948	4·4	110,272

Particulars of the rainfall, productivity, and population of each of these divisions are shown on page 680. It will be observed that the average value per acre is closely related to these factors. The alienated lands in the Western Division are situated mainly in its eastern confines, and are by no means representative of the value of the extensive Crown lands situated further west.

*Capital Invested in Rural Industries.*

The amount of firm capital privately invested in New South Wales was approximately £349,000,000 at 30th June, 1922, made up as follows:—

	£
Alienated land and improvements thereto ...	271,948,000
Capitalised value of lands leased from Crown ...	13,000,000
Machinery and implements ... ..	12,346,000
Live stock ... ..	51,449,000

*Alienated Holdings in Value Series.*

The following is a statement of the unimproved value of land in alienated holdings in value series, and if in considering it the low basis of valuation be kept in mind, useful deductions may be drawn from it:—

Alienated Land. Unimproved Value Series.	No. of Hold- ings.	Alienated Area.	Value Unimproved.	Average Value Unim- proved, per acre.	Proportion per cent. of total.		
					Number.	Area.	Unim- proved value.
£		acres.	£	£ s.			
Under 500 ... ..	34,022	5,411,802	6,971,250	1 6	47·2	8·7	6·7
500 to 1,000 ... ..	14,637	6,412,051	10,477,910	1 13	20·3	10·3	10·1
1,000 „ 2,000 ... ..	13,151	9,532,358	18,010,040	1 18	18·2	15·4	17·4
2,000 „ 3,000 ... ..	4,238	5,273,620	10,069,550	1 18	5·9	8·5	9·7
3,000 „ 5,000 ... ..	2,890	6,049,350	10,804,070	1 16	4·0	9·7	10·5
5,000 „ 10,000 ... ..	1,826	7,275,718	12,260,300	1 14	2·5	11·7	11·9
10,000 „ 15,000 ... ..	561	4,225,472	6,704,370	1 12	·8	6·3	6·5
15,000 „ 20,000 ... ..	274	2,732,878	4,667,770	1 14	·4	4·4	4·5
20,000 and over ... ..	536	15,200,222	23,506,430	1 11	·7	24·5	22·7
Totals ... ..	72,135*	62,118,471	103,441,690	1 13	100·0	100·0	100·0

\* Excludes 7,083 holdings consisting of Crown lands only.

A most striking feature of this statement is the very large number of holdings containing alienated land valued at less than £500 unimproved. These number 34,022, or 47 per cent. of the total, and 17,111, or approximately one-half of them, are in the coastal districts. In this category is included probably the whole of the holdings (numbering 2,680) used incidentally, but not mainly, for agricultural or pastoral purposes.

Nearly one-quarter of the alienated land is contained in holdings whose unimproved value exceeds £20,000. There are 3,197 large holdings (4·4 per cent. of the total) containing alienated land valued at more than £5,000. These embrace in all 29,434,290 acres of alienated land, valued at £47,138,870, which is 45 per cent. of the total value for the State. It is noteworthy that the average value per acre of large estates is little less than that of smaller areas.

It should be noted, however, that no account is taken of the value of Crown leases attached to alienated holdings, and that where two or more holdings are owned by the same individual they are, unless in close proximity to each other, treated as separate holdings.



*Live Stock, Wheat, and Improved Value in Area Series.*

The following statement shows the number of live stock, the area under wheat for grain, and the improved capital value of alienated holdings in area series as at 30th June, 1922 :—

Area Series (Alienated Land).	No. of Hold- Holding.	Alienated Land in Holding.		Total Area of Hold- Holding.†	Area under Wheat for Grain 1921-22.	No. of Sheep at 30th June, 1922.	No. of Cattle at 30th June, 1922.
		Improved Capital Value.	Area.				
Acres.	No.	£000.	acres.	acres.	acres.	acres.	000.
0* ...	7,083*	...	...	29,232	127	3,241	197
1- 30 ...	10,152	7,396	132	585	3	50	48
31- 320 ...	31,572	50,333	4,598	14,247	207	1,384	900
321- 640 ...	12,587	33,669	6,005	16,175	771	2,460	518
641- 1,280 ...	9,077	37,224	8,318	21,027	896	4,300	451
1,281- 2,000 ...	3,348	21,547	5,335	14,738	405	2,989	233
2,001- 3,000 ...	2,053	19,234	5,049	12,698	287	3,123	183
3,001- 5,000 ...	1,456	20,957	5,583	15,611	210	3,699	202
5,001- 10,000 ...	1,096	27,230	7,524	15,648	157	4,849	227
10,001- 50,000 ...	722	39,837	13,203	23,798	117	8,219	357
50,001- 100,000 ...	50	8,187	3,508	4,219	6	1,458	46
Over 100,000 ...	22	6,334	2,863	4,363	9	1,388	36
Totals ...	79,218	£71,948	(2,118	172,391	3,195	37,166†	3,483†

\* Holdings consisting of Crown lands only.

† Excluding live stock not on rural holdings.

‡ Including Crown lands.

In proportion to their area, holdings consisting of Crown lands only are used less than any group of alienated holdings.

More than 80 per cent. of the wheat is grown on holdings whose alienated area is below 3,000 acres, and these holdings also carry 53 per cent. of the live stock (38 per cent. of the sheep and 70 per cent. of the cattle), they embrace 47 per cent. of the alienated land and 62 per cent. of the attached Crown lands; while their improved value is 62 per cent. of the total.

More than half the wheat is grown on holdings whose alienated area is between 321 and 1,280 acres, and the proportion thereafter diminishes rapidly as the size of the holdings increases. The average improved value per acre varies throughout, inversely as the area of alienated land in the holding.

## CHARACTER OF SETTLEMENT.

The character of the rural settlement of New South Wales has been determined largely by the geographical features of the land, the distribution of rainfall, fertility of the soil, accessibility of markets and local factors, such as water supply, timber growth, and means of communication.

Thus in contrast with many older countries where the distribution of settlement has been affected by considerations of defence, settlement in New South Wales has been determined almost exclusively by economic factors. The distribution of industrial activity is principally into pastoral, agricultural, dairying, mining, and manufacturing localities, and along lines of traffic.

The pastoral industry, which caused the original spread of settlement over the State, is still maintained in practically every part of it, although it diminishes in importance from the sole industry in the west to a secondary position in the central and eastern land divisions, where agriculture and dairying are assuming greater importance. From its nature it requires extensive areas and little labour, and it promotes settlement of a scattered nature characterised by small towns, which become smaller and more

scattered towards the western boundary, where ultimately only isolated sheep and cattle stations exist.

Superimposed on the pastoral foundation in the central division the main belt of agricultural settlement stretches from the northern to the southern boundary of the State between the Great Dividing Range and a line to the west, which follows generally the line of 20-inch rainfall in the south, and the 25-inch line in the north. This extensive belt is roughly wedge-shaped, and diminishes from a breadth of about 200 miles in the extreme south to about 100 miles in the north. Practically the whole of the wheat crops of the State are produced here, but only a small portion of the suitable lands have been utilised for agriculture, and pastoral pursuits are still carried on extensively. Settlement in these central districts is more intense than in the west, and a number of flourishing towns with populations ranging from 2,000 to 10,000 exist.

East of the Dividing Range, in the coastal district, dairying is the staple industry, but there is also a certain amount of miscellaneous agriculture in the more fertile portions, and some cattle grazing in the more rugged and less accessible districts. Wheat-growing and sheep-raising are almost entirely absent. Population in the coastal districts is denser than in any other region of the State; the farms are usually small and intensely cultivated.

The following analysis of the State according to natural divisions on a county basis, shows the rainfall, population, area, and production of each; a map showing these divisions is published as a frontispiece to this Year Book.

Division.	Average Annual Rainfall.	Population at Census, 1921.	Total Area.	Production of—				
				Wool. 1921-22.	Wheat (average) 1918-22.	Butter (average) 1918-22.	Minerals, 1921-22.	Manufactures.* 1921-22.
	inches.	000	acres.	lb. 000	bushels. 000	lb. 000	£ 000	£ 000
<i>Coastal—</i>								
North Coast ...	38-63	119	5,410	17	...	43,233	...	1,252
Hunter and Manning ...	24-60	253	10,391	6,028	28	15,949	5,928	4,323
Cumberland ...	31-48	1,069	1,070	98	...	831	1	35,191
South Coast ...	27-56	79	5,484	1,238	1	9,032	1,533	1,286
Total ...	...	1,520	22,355	7,381	29	69,045	7,462	42,052
<i>Tablelands—</i>								
Northern ...	30-32	54	8,928	16,029	84	1,771	100	132
Central ...	24-37	122	8,989	18,690	1,132	1,299	934	1,238
Southern ...	19-32	51	7,914	23,063	141	1,183	15	297
Total ...	...	227	25,831	57,782	1,357	4,253	1,049	1,667
<i>Western Slopes—</i>								
North ...	24-31	55	9,813	25,994	2,819	1,326	50	255
Central ...	20-29	47	6,253	15,076	5,335	553	4	265
South ...	20-28	82	8,186	27,822	5,584	2,201	37	438
Total ...	...	184	24,252	68,892	13,738	4,080	91	958
<i>Central Plains—</i>								
Northern ...	19-23	18	10,031	24,249	204	52	1	51
Central ...	16-22	33	16,030	37,660	4,090	176	4	127
Riverina ...	14-20	72	19,767	47,170	12,335	1,278	6	284
Total ...	...	123	45,828	109,079	16,629	1,506	11	462
<i>Western Plains</i> ...	9-16	48	80,368	42,284	10	27	2,632	1,607
Whole State ...	...	2,102	198,634	285,418	31,763	78,911	11,245	46,746

\* Value added in process of manufacture.

Manufactories proper are not extensive outside the metropolitan and Newcastle districts, but dairy factories operate on a large scale along the coast. Smelting and metal works exist on the coal-fields of the South Coast and Central Tableland and on the silver-lead fields at Broken Hill in the Western Division.

The five principal divisions are strips of territory running from the northern to the southern boundary in a south-westerly direction, and, except for the Western Plains, each is divided into three portions—northern, central, and southern—whereby fourteen subdivisions are secured, each of which presents fairly uniform natural features and is affected by uniform physiographic factors. In the north the region of high average rainfall extends further inland than in the south, with the result that the isohyets run in a general north and south direction. The south-western extremity of the Riverina lies about 100 miles further from the coast than does the north-western extremity of the northern plain, and, as the average annual rainfall diminishes with increasing rapidity towards the west, the northern subdivisions shown above generally receive more rain than the central, and the central more than the southern subdivisions. Rather less than one-half of the total area of the State receives average rains exceeding 20 inches per year, and rather more than one-half receives an average of more than 15 inches per year.

Not only the quantity, but the season and reliableness of the rainfall, and the amount of evaporation are important considerations in determining the productive possibilities of any region. In common with most countries, New South Wales suffers periodically in one part or another from the effects of intermittent rainfall, a disability which local conditions such as the abnormal evaporation and the absorbent nature of the soils of the interior tend to aggravate. This considerable difficulty may be overcome ultimately by water conservation and improvement in cultural methods, but at present it operates powerfully to the detriment of the western hinterland.\*

#### SETTLEMENT IN DIVISIONS.

Pluvial circumstances exert a decisive effect on the nature of the pursuits followed and the extent of settlement in the various regions of the State, and explain their industrial characters.

For the purpose of considering rural settlement, the State may be distributed into five divisions, viz., Coast, Tableland, Western Slopes of the Great Dividing Range, Central Plains and Riverina, and the Western Division. The first four divisions cover the Eastern and Central Land Divisions of the State, trending from north to south in the same general direction as the coast-line and principal mountain range.

#### *Coastal Districts.*

The North Coast district, enjoying the greatest rainfall and embracing a considerable area of fertile coastal plain, is the most productive portion of the State, and the most thickly peopled of the agricultural and pastoral districts. It is a comparatively well developed, favourably situated, and highly prosperous division, watered by a number of streams, which flow through fertile valleys and, in the absence of natural harbours, give access to the ocean. It is traversed by a railway which, on completion, will afford connection with the other lines of the State. The steep descent of the rivers from the highlands provides vast reserves of motive power yet untapped. The staple industries of the district are dairying, cattle grazing, and miscellaneous agriculture; it produces more butter than the whole of the remainder of the State and raises more cattle for slaughtering than any other division.

\* Further particulars of rainfall and evaporation are published on pages 14 and 15 of this Year Book.

For these purposes its undulating coastal hills and more rugged westerly foothills are admirably adapted, but sheep-raising is entirely neglected. The climate is too humid to favour the cultivation of wheat, but in the fertile soils of the valleys and the coastal plains agriculture has assumed some importance, and these are the principal maize-growing localities of the State. Many minor crops are cultivated, some, notably sugar-cane, being of a sub-tropical character. Where the country has not been cleared, much of it is thickly wooded with valuable trees, and timber-getting is an important industry. This prosperous region is characterised by close settlement, but it is not yet nearly fully developed. It possesses about sixteen persons to the square mile and numerous thriving townships. Its largest towns are Lismore, with a population of 9,200; Grafton, 6,100; Kempsey, 3,600; Casino, 3,500; Murwillumbah, 2,900; and Ballina, 2,900. Byron Bay, 1,600, and Coff's Harbour, 2,000, are the principal shipping ports of the district.

The Hunter and Manning division constitutes a unique area among the coastal districts and embraces more diverse physical features than any other. It contains the most valuable portion of the great coal-basin underlying the Hunter River valley. Being that portion of the coast which is opposite the only real gap in the Great Dividing Range, it forms the most natural outlet for the produce of the interior and is the central district of the State. A westerly trend in the mountains has left on either bank of the Hunter River the broadest region of the coastal districts.

On the whole the division is not so well watered as the North Coast, and it contains more rugged country. A strip bordering the coast between Trial Bay and Port Stephens continues the features and industries of the North Coast, relying principally on dairying and cattle-raising for the maintenance of its prosperity. Further inland cattle-grazing and, to some extent, sheep grazing, are the main pursuits. A wide belt in the Hunter River valley is very productive in agriculture and dairying, with cattle and sheep grazing in the more remote parts. The district is traversed by railways north, south, and west of Newcastle, which is its only coastal outlet. Farming occupations support about one-half of the population, or 120,000 persons, who live principally near the coast and along the Hunter River valley, where settlements are numerous. The prevalence of grazing inland renders population sparse. The principal non-mining towns and their populations are Maitland 12,300, Singleton 3,300, and Muswellbrook 2,300. The division ranks next in importance to the North Coast in production of butter, maize, and cattle; fodder crops, such as lucerne, are grown extensively, and considerable areas are covered by vineyards and orchards.

In the centre of the district the most valuable parts of the coal deposits of the State are mined, and this occupation provides sustenance for the other half of the population of the division. The estuary of the Hunter River, on which the flourishing city of Newcastle is situated, has been developed by considerable expenditure into a serviceable harbour for coal shipment, where some overseas vessels call to load butter, meat, and other produce. On its shores growing metal-manufactories are now established. The largest mining centres are Newcastle, with 87,500 inhabitants; Cessnock, 6,700; Kurri Kurri, 5,500; West Wallsend, 4,200; Abermain, 3,000; and Weston, 2,800.

The County of Cumberland centres on Port Jackson, and contains a small area encircling the city and its environs. It includes the oldest settled parts of the State, and its pursuits are dominated by the demands of the large consuming population which it contains. Fruit-growing, poultry-farming, and dairy-farming for the supply of milk, are the principal rural industries, and from them the metropolitan market draws a large part of its supplies.

The population of the city proper is 110,000, but it has extensive and widely distributed suburban areas, which make its total population 956,000, or 44 per cent. of the inhabitants of the State. In addition, for a distance of 20 miles along the railways, which radiate from it, there are important residential towns closely dependent upon the metropolis, with which frequent passenger train services are maintained. Sydney is the political and economic centre, and it conducts a very large part of the professional, political, commercial, and manufacturing business of the State. It is the terminus of all the principal railways, the centre of wool, wheat, cattle, and sheep sales, the shipping port, contains the terminal wheat-elevator, the principal ship-building yards, the cattle slaughtering and meat-freezing works, and most of the principal manufactories, whose work is valued at more than £35,000,000 annually; in addition, it handles practically the whole of the overseas trade of the State, amounting to £100,000,000 per year.

The largest independent settlements in the district and the populations are Parramatta, 15,000, a residential and fruit-growing centre; Liverpool, 6,400; Windsor, 4,200; Penrith, 3,700; Campbelltown, 2,400; and Richmond, 2,000.

The South Coast district shows less rural development than any other portion of the coastal belt, and its prosperity is less buoyant than that of the North Coast. Its rural industries support a population of about 60,000, which is but half that of the North Coast or an equal area. While its pursuits are substantially the same its arable lands are inextensive and it has fewer natural advantages. The steep slopes of the Great Dividing Range hem in the coastal plain nearer the sea and deprive it of the benefits of large rivers, so that it lacks extensive valleys and river flats. Its northern end is served by railways, but its southern portion, comprising two-thirds of its area, lacks transport facilities, and communication is difficult, depending on private steamships and less serviceable motor transport. Hence dairy-farming is restricted to the accessible areas and is on a far smaller scale than on the North Coast. Butter is not so generally made, although it is manufactured in large quantities. Considerable attention is given to cheese, and the South Coast produces the greater part of the State's output of this commodity. Although dairy-farming is limited, cattle-grazing is not conducted so extensively as in the north, but it is the only other industry of importance, for there is comparatively little agriculture. The more northerly localities, such as Camden, are among the oldest settled parts outside the County of Cumberland, and were the original centre of the merino sheep flocks. Sheep are still grazed there, but their numbers are now relatively unimportant. This district, being readily accessible from the city, supplies the metropolitan market with large quantities of produce, especially milk, and has become a favourite resort for country residences for city dwellers.

Around Wollongong, on the coast, the southern outcrop of the great coal measures is mined. The fields are not so extensive as those of the north, but they maintain a population of about 30,000. The development of manufactories so far has been small, but large ore-smelting works have been established at Port Kembla, where overseas shipping facilities exist.

The largest mining towns are Wollongong, 7,000; Bulli-Woonona, 4,500; Corrimal, 2,400; and Helensburgh, 1,900. The non-mining towns are not of outstanding importance. Bowral, the largest, has 2,300 inhabitants; Berry, 2,300; Nowra, 2,200; Camden, 2,000; Moss Vale, 2,300; and Kiama, 2,000. Settlement is greatest in the northern localities, where transport facilities are good and where the mountains are farthest from the sea. South of Nowra, the terminus of the South Coast railway, only one town of note exists—Bega, with a population of 1,900.

The following table presents a summary of the tenure and extent of occupied holdings in the four main divisions of the coastal belt as at 30th June, 1922 :—

Division of Coast.	Total Area of Division.	Holdings of 1 acre and upwards.	Area of land occupied in holdings of 1 acre and upwards for Agricultural and Pastoral Purposes.					Area of Alienated Land suitable for Cultivation.
			Alienated.			Crown Lands.	Total.	
			Freehold.	Private Rented.	Total.			
	acres.	No.	acres.	acres.	acres.	acres.	acres.	acres.
	000		000	000	000	000	000	000
North ... ..	5,410	11,024	2,150	424	2,574	1,233	3,807	406
Hunter-Manning ... ..	10,391	11,497	4,257	466	4,723	1,600	6,323	383
Cumberland ... ..	1,071	5,453	290	76	366	3	369	119
South ... ..	5,484	4,905	1,395	317	1,712	702	2,414	189
Total ... ..	22,356	32,879	8,092	1,283	9,375	3,538	12,913	1,097

Apart from the small area in the county of Cumberland which surrounds the metropolis, the North Coast is by far the most closely-settled part of the Coastal Division. The average areas of holdings in the various divisions are—North Coast, 345 acres; Hunter and Manning, 550 acres; and South Coast, 492 acres. The proportion of the total area of each division occupied in holdings is 71 per cent. in the North Coast Division, 61 per cent. in that of Hunter and Manning, but only 45 per cent. on the South Coast. The system of privately renting land is more extensively practised in the coastal districts than elsewhere in New South Wales. Nearly 14 per cent. of the alienated land is rented from private owners. Of the total land in occupation about 64 per cent. is used by its owners, 27 per cent. is leased from the Crown, and 9 per cent. is rented privately.

Included in the alienated lands in coastal districts are 481 holdings, on which 728 share farmers occupy 6,776 acres of cultivation and 142,389 acres as dairy farms.

Owing to the rugged nature of the country only a small proportion of the land is considered suitable for cultivation and of this area less than one-quarter was cultivated in 1921-22.

The following analysis of the main purposes for which these holdings were used in 1921-22 provides an instructive statement of the diversity of pursuits :—

Purpose.	Number of Holdings in Division.				
	North Coast.	Hunter and Manning.	Cumberland.	South Coast.	Total.
Agriculture only ... ..	881	1,747	2,339	374	5,341
Dairying only ... ..	4,753	1,664	402	1,697	8,516
Grazing only ... ..	2,265	3,409	505	1,342	7,521
Agriculture and dairying ... ..	1,826	1,794	143	394	4,157
Agriculture and grazing ... ..	329	856	283	180	1,648
Dairying and grazing ... ..	441	807	57	324	1,629
Agriculture, dairying, and grazing ... ..	283	387	58	44	772
Poultry only ... ..	4	94	1,048	52	1,198
Poultry, Bees, Pigs, etc. ... ..	9	21	98	11	139
Unoccupied, or used mainly for other purposes ... ..	233	718	520	487	1,958
Total ... ..	11,024	11,497	5,453	4,905	32,879

The coast district contains 94 per cent. of the holdings used for dairying only in New South Wales, and the North Coast district contains 52 per cent. of the number. Dairying and mixed farming pursuits are the main activities of the population; but a considerable proportion of the farms is used for cattle-raising.

The following table shows for the whole coastal division the number and extent of alienated holdings of various sizes, together with their total value and the area of Crown lands attached to them on 30th June, 1922 :—

Area of Holdings Alienated.	Number of Holdings.	Area Occupied.			Value of Alienated Land.	
		Alienated Land.	Crown Land attached to Alienated Holdings.	Total.	Un-improved.	Improved.
Acres.		Acres.	Acres.	Acres.	£ 000.	£ 000.
0* ...	611	...	...	497,787	...	...
1- 30 ...	6,920	86,122	27,403	113,525	2,011	5,832
31- 320 ...	18,921	2,657,665	648,723	3,306,388	12,329	37,970
321- 640 ...	3,709	1,671,139	451,664	2,122,803	4,312	12,773
641- 1,281 ...	1,722	1,542,395	411,655	1,954,050	3,038	8,317
1,281- 2,000 ...	470	734,687	280,985	1,015,672	1,372	3,725
2,001- 3,000 ...	234	569,335	208,404	777,739	1,074	2,614
3,001- 5,000 ...	150	578,627	276,120	854,747	1,059	2,604
5,001-10,000 ...	98	665,675	160,341	826,016	1,127	2,735
10,000 and over ...	44	869,612	575,202	1,444,814	1,319	3,207
Totals...	32,879	9,375,257	3,040,497	12,913,541	27,641	79,777

\* Holdings consisting of Crown lands only.

Nearly 92 per cent. of the alienated holdings are less than 640 acres in extent. They embrace only 47 per cent. of the alienated land with 4.3 per cent. of the Crown lands attached. Their aggregate improved value is 71 per cent. of the total.

#### Tablelands.

Most of the rugged portions of the State are contained in the tableland divisions and, although extensive plateaux exist, considerable areas are rock-strewn and not adaptable to agriculture. Hence grazing has remained the staple industry, although many farmers combine agriculture with grazing, and large areas are cultivated in suitable localities. The rainfall is ample throughout and the headwaters of most of the principal rivers make this a well-watered region. Railway communications are good, but, on the whole, settlement is sparse, fewer flourishing towns exist than on the coast, and small settlements are rarer because lands suitable for intense farming are more scattered. Neither dairying nor agriculture has been developed, and pastoral pursuits alone are extensive.

The Northern Tableland embraces the districts of highest average elevation in the State, and includes a considerable area on the coastal side of the Dividing Range. Here cattle-raising is very extensive, and large numbers of sheep are depastured. Very little butter is made, and cultivation is restricted to small areas of wheat and maize. The production of wool is large, and in cattle-raising it is next in importance to the North Coast and the Hunter and Manning. Relatively its population is only one-quarter as great as that of the North Coast, but sparse settlement is characteristic of all pastoral regions. In the whole area there are only ten towns of importance, of which Armidale, 5,400; Glen Innes, 4,700; Inverell, 4,400;

Tenterfield, 2,700; and Tingha, 2,000, are noteworthy. Extensive deposits of tin underlie a great part of the division, and tin-mining is carried on at Tingha and Emmaville.

The Central Tableland includes the first settled portions of the interior, and contains some of the largest inland towns; it presents an appearance of general prosperity, and supports a population twice as great as the Northern Tableland. Sheep-grazing is the principal pursuit, and agriculture, particularly wheat-growing, is important. Cattle-raising is not followed generally, and there is little dairying, but miscellaneous farming, including the growing of maize, potatoes, and oats, is important. The largest towns dependent on farming industries are Bathurst, 9,400; Orange, 7,600; Cowra, 4,000; and Mudgee, 3,200; while on the Blue Mountains, amidst splendid scenery, two large residential towns have grown up within easy access of Sydney—Katoomba, with 9,700 inhabitants, and Blackheath, 2,400. Formerly gold-mining was of considerable importance in this division, but it is now carried on at only a few struggling settlements. Mining in other directions has caused considerable development at Lithgow, where the western outcrop of the coal measures is worked, supporting a population of about 15,000, and rendering possible the establishment of iron and steel works and a small-arms factory in the neighbourhood. Large quarries supply materials for the manufacture of the State's supply of lime and cement at Portland and Kandos, whose populations are approximately 2,800 and 1,100 respectively.

The Southern Tableland contains comparatively little arable land, and is used almost exclusively for sheep-grazing, whence it contributes an important quota to the wool clip of the State. Few cattle are depastured, and for the most part settlement is scanty, as on the Northern Tableland. The only towns of importance are Goulburn, 11,700, and Yass, 2,500.

The following table provides an analysis of the number and tenure of rural holdings in the three main divisions of the Tablelands as at 30th June, 1922 :—

Division of Tableland.	Total area of division.	Holdings of 1 acre and upwards.	Area of land occupied in Holdings of 1 acre and upwards for agricultural and pastoral purposes.					Area of Alienated Land suitable for culti- vation.
			Alienated.			Crown Lands.	Total.	
			Freehold.	Private rented.	Total.			
	acres.	No.	acres.	acres.	acres.	acres.	acres.	acres.
	000		000	000	000	000	000	000
Northern ...	8,928	4,362	3,685	132	3,817	3,426	7,243	332
Central ...	8,989	7,365	3,804	305	4,109	2,028	6,137	969
Southern ...	7,914	4,285	3,863	323	4,186	2,331	6,520	361
Total ...	25,831	16,012	11,352	760	12,112	7,788	19,900	1,662

While the proportion of land occupied in each division varies from 81 per cent. in the northern to 68 per cent. in the central, and 82 per cent. in the southern tablelands, rural settlement is densest in the central districts, which were the first to be occupied. Less than one-half of the total area of the tableland division is alienated, and two-fifths of the area occupied is owned by the Crown. The system of private-renting is much less extensive than in the coastal districts, only 6·3 per cent. of the area alienated, or 3·8 per cent. of the total area occupied, being held in this way. In addition, there were 263 share-farmers on 188 holdings, comprising 31,019 acres of cultivation and 20,195 of dairy farms. As in the coastal division the proportion of alienated land suitable for cultivation is very small, but only about 25 per cent. of the arable land was cultivated in 1921-22.



The main purposes for which holdings were used in each division of the tablelands during 1921-22 are shown in the following table:—

Purpose.	Number of Holdings.			
	Northern Tableland.	Central Tableland.	Southern Tableland.	Total.
Agriculture only ... ..	250	1,396	167	1,813
Dairying only ... ..	152	78	125	355
Grazing only ... ..	2,200	2,741	2,734	7,675
Agriculture and Dairying ... ..	188	212	42	442
Agriculture and Grazing ... ..	1,046	2,174	803	4,023
Dairying and Grazing ... ..	193	91	117	401
Agriculture, Dairying, and Grazing ... ..	228	179	112	519
Poultry, Bees, Pigs, etc. ... ..	9	56	13	78
Unoccupied and used for other purposes...	96	438	172	706
Total ... ..	4,362	7,365	4,285	16,012

Grazing pursuits predominate throughout, but a considerable proportion of the holdings are used for agricultural purposes.

The following statement relating to the whole tableland division shows the number and extent of alienated holdings of various sizes, together with their total value and the area of Crown lands attached to them on 30th June, 1922:—

Area of Holding Alienated.	Number of Holdings.	Area Occupied.			Value of Alienated Land.	
		Alienated land.	Crown lands attached to Alienated Holdings.	Total.	Un-improved.	Improved.
Acres.		Acres.	Acres.	Acres.	£ 000.	£ 000.
0* ... ..	1,136	...	...	1,197,443	...	...
1- 30 ... ..	1,538	21,799	73,729	95,528	231	877
31- 320 ... ..	6,676	993,660	1,199,763	2,193,423	2,000	6,009
321- 640 ... ..	2,722	1,258,128	1,180,070	2,438,198	1,799	4,921
641- 1,280 ... ..	1,952	1,784,689	1,081,636	2,866,325	2,316	6,404
1,281- 2,000 ... ..	780	1,249,771	572,828	1,822,599	1,564	4,148
2,001- 3,000 ... ..	457	1,129,172	610,378	1,739,550	1,347	3,629
3,001- 5,000 ... ..	359	1,390,948	666,016	2,056,964	1,699	4,626
5,001-10,000 ... ..	240	1,660,891	530,811	2,191,702	2,170	5,892
10,000-and over ... ..	152	2,622,944	675,101	3,298,045	3,745	8,990
Totals ... ..	16,012	12,112,002	6,590,332	19,899,777	16,871	45,506

\* Holdings consisting of Crown lands only.

Nearly 87 per cent. of the alienated holdings are less than 1,280 acres in extent; these embrace only 33 per cent. of the total area alienated, and have 54 per cent. of the Crown lands attached to them; their improved value is only 40 per cent. of the total.

#### *Western Slopes.*

The divisions of the Western Slopes contain gently undulating lands with a westerly trend, watered by the upper courses of the inland rivers, and an adequate and regular rainfall. These fertile areas are eminently suitable for agriculture and are the most productive portions of the interior. As yet they are only sparsely settled, and very great development is possible.

The North-Western Slopes are situated nearer the coast than the other slopes and receive appreciably more rain. They stretch from the Queensland

border to the Warrumbungle Mountains, and include the Liverpool Plains and the upper portions of the Gwydir and Namoi Rivers, with their tributaries. Practically the whole of the agriculture of the northern parts of the State is conducted in this division, which grows extensive wheat crops, with a certain amount of maize, usually in rotation. The division, however, is predominantly pastoral; its cattle herds are of some importance, and it produces large quantities of wool and about one-tenth of the wheat of the State. Wide scope for development still exists. Its population is only about three persons per square mile, and, with the exception of the flourishing towns of Tamworth, which has 7,300 inhabitants, Gunnedah, 2,500, and Quirindi, 2,200, it has no important centres of population.

The Central-Western Slopes cover a narrow strip of splendid agricultural lands, where most of the farmers cultivate portions of their holdings and depasture sheep on the remainder. The land receives regular rainfall and has good railway facilities, which are continually being extended. Mixed farming—sheep and wheat—is here the characteristic pursuit, and, relatively speaking, it is the greatest wheat-producing division; one-twelfth of its area is cultivated, but it is only one-third of the size of the Riverina, the most important wheat district. Its sheep flocks are numerous, and produce considerable quantities of wool. Few cattle are depastured and dairying is of no importance. Settlement is not close, but a number of important towns are located here. Most important are Dubbo, with a population of 5,000; Forbes, 4,500; Parkes, 4,000; and Wellington, 3,900. This division contains one-thirtieth of the area of the State, and produces nearly one-sixth of the wheat-crop and one-twentieth of the wool-clip.

The South-Western Slopes contain another rich area of well-watered, well-connected, and rapidly developing country eminently adaptable to cultivation, and capable of carrying a far greater population than it at present holds—about six persons per square mile. At present only one-thirteenth part of its area is under cultivation, and the farmer generally depends on sheep to assure his position when wheat-crops fail, so that grazing is an extensive industry supplementary to wheat-growing. It does not possess large cattle herds, but produces an important quantity of butter. Its sheep are numerous, and it produces one-tenth of the wool and rather more than one-sixth of the wheat of the State. Oats are an important secondary crop in this region. The townships are numerous and generally flourishing, and the number of important centres is increasing steadily. The principal towns are Albury with 8,000 inhabitants; Wagga Wagga, 8,200; Junee, 3,500; Cootamundra, 3,600; Young, 3,300; and Temora, 3,100. It is one of the most rapidly developing portions of the State.

The area, number, and tenure of rural holdings in the various districts of the Western Slopes are shown below:—

Division of Slopes.	Total Area of Division.	Holdings of 1 acre and upwards.	Area of Land occupied in Holdings of 1 acre and upwards for Agricultural and Pastoral purposes.					Area of Alienated Land suitable for Cultiva- tion.
			Alienated.			Crown Lands.	Total.	
			Freehold	Private Rented.	Total.			
	acres. 000	No.	acres. 000	acres. 000	acres. 000	acres. 000	acres. 000	acres. 000
North Western...	9,813	4,956	5,575	212	5,787	2,986	8,773	1,542
Central Western..	6,253	4,141	3,458	187	3,645	1,508	5,153	1,963
South Western ...	8,186	6,238	5,337	257	5,594	1,248	6,842	2,109
Total ...	24,252	15,335	14,370	656	15,026	5,742	20,768	5,614

In relation to area, settlement is most dense on the Central Western Slope, and the highest proportion of occupied land is again greatest in the northern districts. The proportion of Crown lands occupied is 28 per cent. of the total; the system of private renting is less extensive than in the coastal or tableland districts, the area private rented being only 4.3 per cent. of the total area alienated and 3.3 per cent. of the area occupied. The area of arable land is very considerable, constituting nearly a third of the total area of alienated land considered suitable for cultivation in the State. Thirty-seven per cent. of the private lands of the division are arable, and this proportion is as great as 54 per cent. in the Central Western Slope. Approximately 32 per cent. of the arable land in the Slopes division was under crop in 1921-22.

The following statement shows the principal purposes for which rural holdings were used in the Western Slopes Division in 1921-22 :—

Purpose.	Number of Holdings in Division.			
	North Western Slope.	Central Western Slope.	South Western Slope.	Total.
Agriculture only ... ..	454	331	829	1,614
Dairying only ... ..	50	17	61	128
Grazing only ... ..	1,923	807	1,794	4,524
Agriculture and Dairying ... ..	296	19	85	400
Agriculture and Grazing ... ..	1,910	2,786	2,846	7,542
Dairying and Grazing ... ..	67	8	138	213
Agriculture, Dairying, and Grazing ... ..	121	72	184	377
Poultry, Bees, Pigs, etc. ... ..	11	7	5	23
Unoccupied and used for Other Purposes...	124	94	296	514
Total ... ..	4,956	4,141	6,238	15,335

Mixed farming—agricultural and grazing—is the principal rural activity, but grazing predominates on the North-western Slopes, where the arable lands are relatively of small extent. The number of holdings used for agricultural purposes only is important, but dairying and small farming are not extensive.

The number and extent of alienated holdings of various sizes, together with their total value and the area of Crown lands attached to them, are shown in the following statement relating to the whole of the Western Slopes Division as at 30th June, 1922 :—

Area of Holding Alienated.	Number of Holdings.	Area Occupied.			Value of Alienated Land.	
		Alienated Land.	Crown Lands attached to Alienated Holdings.	Total.	Un-improved.	Improved
acres.		acres.	acres.	acres.	£ C00.	£ C00.
0*	1,037	...	...	1,614,563	...	...
1- 30 ...	1,286	18,604	61,549	80,153	12	527
31- 300 ...	4,424	685,342	477,760	1,163,102	1,733	4,910
321- 640 ...	3,458	1,679,335	697,950	2,377,285	3,275	9,118
641-1,280 ...	2,617	2,401,214	823,724	3,227,938	4,121	12,005
1,281-2,000 ...	980	1,555,581	373,634	1,929,215	2,574	7,330
2,001-3,000 ...	607	1,492,918	408,993	1,901,911	2,368	6,559
3,001-5,000 ...	437	1,672,346	327,907	2,000,253	2,642	7,423
5,001-10,000 ...	323	2,243,735	496,060	2,739,795	3,802	10,326
10,001 and over ...	166	3,276,633	456,622	3,733,255	5,677	12,864
Totals ...	15,335	15,025,708	4,127,199	20,767,470	26,314	71,062

\*Holdings consisting of Crown Lands only.

Of the 14,298 alienated holdings only 926 exceed 3,000 acres in area, but these embrace 7,193,000 acres or nearly 48 per cent. of the alienated land, and in addition have attached to them 1,280,600 acres, or 31 per cent. of the attached Crown lands.

#### *Plains and Riverina.*

The Plains of the Central Division, including the Riverina, constitute the eastern portion of a remarkable extent of almost level country, stretching from the last hills of the Western Slopes to the western boundary of the State, with an average width of 120 miles. They comprise the great sheep districts of the State and about one-half of the agricultural lands. Generally speaking, they are not well watered, the average rainfall is low, and its intermittency is a source of frequent loss. They are traversed by the western rivers in their lower courses, but their flow is irregular and, on account of their fewness, they do not supply water to a very extensive area. Railway facilities are not so good as in the more easterly districts, but they are being improved steadily, particularly in the Riverina. Communication and transport to outlying districts depend most on private motor conveyances, and horse-drawn coaches and waggons. Artesian water underlies a considerable area on the north, and bores serve to supply permanent water in a number of localities; in the south, sub-artesian bores are of great practical utility.

The Northern Plains possess generally the same physical characteristics as those further south, but are almost without a vestige of agriculture, and this is probably due to the facts that the greater part of the rain falls in the summer months, and that the heavy black soils, which here are extensive, have been found unsuitable for cultivation. Cattle-grazing is of little practical importance, and the district is devoted almost entirely to sheep. Fewer stock per acre are carried here, and in the plains generally, than elsewhere, because of the frequent dry seasons and the absence of permanent supplies of fodder and water. Settlement is widely scattered, and the density of population is little more than one person per square mile; there are few towns and most of them are small. The only important centres are Moree with a population of 3,200, and Narrabri, 2,400. This district produces a very valuable wool-clip.

The extensive Central Plains division contains a wide expanse of territory and its pursuits are accordingly diversified. Its rainfall is of a non-seasonal character and is good on the east, where there are important wheat areas among the sheep stations. Toward the west, as rainfall and railway facilities diminish, the only industry is sheep-raising. The division contains one twelfth of the area of the State and produces about one-eighth of the wool-clip and one-seventh of the wheat-crop, and is highly productive. It does not, however, maintain a large population; many large estates exist, and there is comparatively little settlement, the population being less than one person per square mile. The only large towns are Coonamble and Gilgandra, each with about 2,200 inhabitants.

The southern portion of the plains is known as the Riverina on account of its important waterways. It contains the largest and most serviceable of the western rivers. Its soils are fertile and large areas are eminently adaptable to agriculture. Although the rainfall is generally less than in other divisions, the greater part falls during the winter and spring, when wheat-sowing and growth take place, so that bountiful harvests are produced. For this reason the locality has become the most important wheat-growing centre of the State and the scene of the greatest general development in recent years. In a normal season it produces enough wheat to meet the requirements of the

whole State. The cultivation of wheat has extended westward as far as Hillston and Balranald on the Lachlan River. Wheat-growing, frequently in conjunction with sheep-grazing, is the principal activity, but farms used for wheat only and sheep only are numerous. In the centre of the Riverina, on the north bank of the Murrumbidgee River, a large and growing irrigation area has been established. It contains nearly 1,800 farms devoted to dairying, fruit-growing, and agricultural production. The easterly part of the Riverina is closely settled and contains many prosperous townships; in the westerly portion settlement is sparse, but the population is on the average about four persons per square mile. The principal towns are Narrandera, with 3,100 inhabitants; Deniliquin, 2,700; Hay, 2,600; and Corowa, 2,500.

The following table shows the number, tenure, and extent of holdings occupied for agricultural and pastoral purposes in the Division on 30th June, 1922 :—

Plains of Central Division.	Total Area of Division.	Holdings of 1 acre and upwards.	Area of Land occupied in Holdings of 1 acre and upwards for Agricultural and Pastoral Purposes.					Area of alienated Land suitable for Cultivation.
			Alienated.			Crown Lands.	Total.	
			Freehold.	Private rented.	Total.			
	acres.	No.	acres.	acres.	acres.	acres.	acres.	acres.
North ...	000		000	000	000	000	000	000
Central...	10,031	1,668	3,304	67	3,371	4,791	8,162	452
Riverina ...	16,030	3,531	6,743	305	7,048	8,049	15,097	3,168
	19,767	8,201	12,775	559	13,334	4,938	18,272	5,824
Total ...	45,828	13,400	22,822	931	23,753	17,778	41,531	9,444

The existence of a closely-settled but comparatively small area of irrigated lands in the Riverina exaggerates the apparent density of settlement in that division. Little more than one-half of the total area occupied has been alienated, but while the proportion alienated is 33 per cent. of the total area in the northern districts it is twice as great in the Riverina, where the land is more productive.

The area held under the system of private-renting is of small extent, being in all cases less than 5 per cent. of the total area alienated. The area of Crown lands occupied is very considerable in all divisions, but in the northern and central districts it greatly exceeds the area of occupied alienated lands.

Share-farming is not extensive in the north, but in the Riverina 444 holdings are occupied by 713 share-farmers, who had 206,685 acres in cultivation in 1921-22 in addition to 3,484 acres of dairy farms. Only 13 per cent. of the alienated land in the northern plains is considered arable, but the proportion in the Central Plains and Riverina is 44 per cent.

The following table shows the main purposes for which the holdings in the above table were used in 1920-21 :—

Purpose.	Number of Holdings in Plains of Central Division.			
	North.	Central.	Riverina.	Total.
Agriculture only ...	43	271	2,206	2,520
Dairying only ...	3	3	72	78
Grazing only ...	1,287	1,643	1,504	4,434
Agriculture and Dairying ...	1	2	211	214
Agriculture and Grazing ...	257	1,469	3,789	5,515
Dairying and Grazing ...	9	.....	88	97
Agriculture, Dairying, and Grazing ...	2	20	128	150
Poultry, Bees, Pigs, etc. ...	.....	.....	5	5
Unoccupied and used for other purposes...	66	123	198	387
Total ...	1,668	3,531	8,201	13,400

While grazing, with a very little mixed-farming and agriculture, predominates in the northern districts, agriculture assumes increasing importance in the South until, finally, combined with grazing, it predominates in the Riverina. On the irrigated lands of the Murrumbidgee a considerable number of holdings are used for small farming, and this accounts for the greater part of the holdings used for agriculture only and for dairying in the Riverina. Nevertheless, taking into account the areas shown in the previous table, the existence of agricultural pursuits is seen to have a very pronounced effect on the density of settlement.

The number, total area of alienated land and of Crown lands attached, and the value of alienated land in rural holdings in the plains of the Central Division (including the Riverina), as at 30th June, 1922, are shown in area series in the following table :—

Area of Holding Alienated.	No. of Holdings.	Area Occupied.			Value of Alienated Land.	
		Alienated Land.	Crown Lands attached to Alienated Holdings.	Total.	Unimproved.	Improved.
Acres.		Acres.	Acres.	Acres.	£	£
0*	3,393*	...	...	6,044,834	...	...
1-30	331	4,912	32,619	37,531	22,740	140
31-320	1,322	232,270	480,813	713,083	490,210	1,320
321-640	2,587	1,337,989	881,085	2,219,074	2,485,950	6,702
641-1,280	2,702	2,512,654	2,107,762	4,620,416	3,913,580	10,292
1,281-2,000	1,083	1,736,941	1,200,936	2,937,877	2,454,450	6,191
2,001-3,000	732	1,801,358	947,752	2,749,110	2,395,490	6,135
3,001-5,000	465	1,763,754	729,907	2,493,661	2,439,980	6,035
5,001-10,000	393	2,667,845	1,533,118	4,200,963	3,471,250	8,019
10,001 and over	392	11,695,555	3,819,033	15,514,588	14,036,281	28,365
Totals ...	13,400	23,753,278	11,733,025	41,531,137	31,709,931	73,199

\* Holdings consisting of Crown lands only.

Approximately 80 per cent. of the alienated holdings contain less than 2,000 acres of alienated land embracing 24 per cent. of the total alienated area with 40 per cent. of the Crown lands attached. Their aggregate improved value represents 33 per cent. of the total improved value of alienated holdings.

#### *Western Division.*

It would appear that the plains of the Western Division, one-third of which receives less than 10 inches of rain per year and the remainder less than 15 inches, will never be developed into a productive region maintaining a population commensurate with its area. While the soils are uniformly fertile, the lack of rain, permanent water and grasses, and the high rate of evaporation, ranging up to 90 inches per year, render it unproductive in a high degree. Except on a few small irrigated areas there is scarcely a sign of agriculture or dairying, and by reason of the small rainfall, the sheep-carrying capacity of the land is only about one-fifth as great as that of the plains further east; but the climate is well suited to the production of high-grade merinos. It is a lonely region for the most part occupied in large-holdings on a long lease tenure. It presents an immense field for scientific development, but its possibilities are problematical. Whether irrigation from the Murray and the vast lake-reservoirs of the South Darling, or in the artesian water zone of the north, combined with some great advance in dry-farming methods will render

any extensive areas adaptable to agriculture, or whether water and fodder conservation will render it capable of maintaining large numbers of sheep and suitable for closer settlement, remain questions which are not likely to arise seriously until the more attractive easterly regions have made very great advances in settlement. It is contended, however, that in the south there are large areas which only require railway facilities to render them profitable for agriculture. At present, excluding the mining districts, it is a vast region comprising two-fifths of the area of the State, producing less than one-seventh of the pastoral produce, but practically nothing besides, and supporting only 21,000 persons (one person to 6 square miles) or one-hundredth part of the population. Near the western boundary, however, is situated one of the richest silver-lead fields of the world, which supports in the large mining town of Broken Hill, a population of 22,700 persons. In the eastern part of the division exist extensive copper deposits, which formerly maintained thriving settlements at Cobar, Canbelego, and Nymagee. For the rest, the division possesses only one town, Bourke, with a population exceeding 1,000, five exceeding 500, and about twenty smaller townships.

The following table shows the number and extent of holdings in the Western Division as at 30th June, 1922 :—

Area Series (alienated and Crown lands combined).	East of Darling.		West of Darling.	
	No. of Holdings.	Area of Holdings.	No. of Holdings.	Area of Holdings.
Acres.		Acres.		Acres.
1- 3,000	341	121,543	165	91,675
3,001- 10,000	86	563,251	68	484,317
10,001- 20,000	158	2,259,934	123	1,616,180
20,001- 50,000	209	6,281,154	155	4,838,613
50,001-100,000	53	3,874,906	47	3,406,665
Over 100,000	93	21,496,230	91	32,244,422
Total ...	943	34,597,018	649	42,681,872

Although the area west of the Darling constitutes more than one-half of the total area occupied, the number of holdings in all groups is less than in the eastern sector. Nearly 70 per cent. of the total area is occupied by 184 holdings exceeding 100,000 acres in extent.

The total area of alienated land in the rural holdings in the Western Division is only 1,852,226 acres and of this 37,525 acres is privately rented. The total area of Crown lands in rural holdings is 75,426,664 acres. Of the total area of land occupied only 8,241 acres were under crop in 1921-22, although 86,447 was considered by the occupiers to be suitable for cultivation. The unimproved value of the alienated land was returned as £904,670 and the improved value as £2,404,280; these values were represented by 686 alienated holdings of which 45 each exceeding £5,000 in value unimproved, contained approximately 998,000 acres of alienated land.

## VALUE OF MACHINERY USED IN RURAL INDUSTRIES.

A comparison of the value of farming implements and machinery in use during various years since 1901 is shown in the following table, allowance being made for depreciation :—

Season.	Farming.	Dairying (including Factory Machinery.	Pastoral.*	Total Value.
	£	£	£	£
1900-01	2,065,780	237,220	754,050	3,057,050
1905-06	2,557,260	365,440	1,120,990	4,043,690
1910-11	3,414,620	534,740	1,483,080	5,432,440
1915-16	5,362,030	570,950	2,015,050	7,948,030
1919-20	6,123,750	812,070	3,016,070	9,956,890
1920-21	7,120,380	910,260	3,141,030	11,171,670
1921-22	7,884,710	1,042,100	3,419,040	12,345,850

\* Includes in many cases farming implements used on pastoral holdings.

## AGRICULTURAL AND PASTORAL LABOUR.

Particulars of persons above the age of 14 years regularly employed in farm work on a rural holding are collected annually. These are classified according to status, and the amount of the salaries and wages paid to those employees in receipt of remuneration is also ascertained. Temporary hands employed during harvesting and shearing operations, or by contractors doing rural work, or on other temporary work, are not included in the returns, and there are many workers who earn their livelihood from such casual employment. Persons principally engaged in domestic work are also excluded. The numbers of and wages received by persons permanently employed in farm work on rural holdings during the year ended 30th June, 1922, were as follow :—

Capacity.	Males.	Females.	Total.
	No.	No.	No.
Owners and Lessees ... ..	66,823	1,920	68,743
Permanent Employees receiving wages ... ..	37,152	1,885	39,037
Relatives not receiving wages ... ..	16,930	13,037	29,967
<b>Total ... ..</b>	<b>120,905</b>	<b>16,842</b>	<b>137,747</b>
Wages paid to permanent employees (including value of board and lodging ... ..	£ 6,295,300	£ 185,300	£ 6,580,600

There were in all 79,218 holdings recorded, so that in nearly 10,500 cases owners or lessees did not work on their holdings. The number of permanent wage-earners employed is surprisingly low.

Of the relatives not receiving wages, 8,176 males and 11,055 females above the age of 14 years were employed in the coastal districts, where dairying is the principal farming activity. This accounts for nearly 85 per cent. of the number of females employed; the remainder of the female relatives employed were uniformly distributed over the other divisions of the State.

The total amount of wages paid to permanent employees during the year was £4,885,331, in addition to board and lodging, etc., valued at £1,695,275, or a total of £6,580,606, the average remuneration being £172 per annum to males and £98 per annum to females.



## RURAL FINANCE.

The problem of promoting effective rural settlement in New South Wales for many years has been associated closely with that of rural finance. While comparatively few settlers have been possessed of sufficient capital to purchase land outright from the Crown, there has been a general desire to acquire a freehold tenure, neither private nor State tenancy proving popular. Moreover, the proper development of rural holdings requires the investment of much capital for lengthy periods, and facilities for temporary financial accommodation, particularly during periods of drought.

The Land Act of 1861, aiming to encourage the settlement of an agricultural population beside the pastoral lessees, introduced "free selection before survey" and sales of Crown land by deposit and instalments with conditions as to residence, etc. By this means much more land was sold in the next twenty-three years than was sold at auction, and since 1889 alienation has been almost exclusively by conditional purchase. Beyond the introduction of this plan of selling Crown lands on terms, little was done to provide financial aid for settlers until the end of the last century, when the agricultural and dairying industries were developing, and droughts were destroying settlement.

In 1899 an Advances to Settlers Board was appointed by the Government to make loans to farmers in necessitous circumstances or embarrassed by droughts. Advances were limited to £200 for a term of ten years at 4 per cent. interest. The venue of the Act was changed in 1902, when the Board was empowered to make advances to farmers for any approved purpose up to £500, repayable within thirty years.

In 1906 the functions of the Board were transferred to the Commissioners of the Government Savings Bank, and the limit of individual advances was raised to £2,000. By 1921, when the Rural Bank was established to carry on and extend the work, the outstanding advances amounted to £3,250,000, secured by mortgages from 7,000 borrowers. In all, 20,170 advances amounting to £7,570,000, had been made to 30th June, 1922.

In 1901 a Closer Settlement policy was introduced by the Government, with a view to acquiring and subdividing large estates. In the next twenty-one years 2,432,785 acres were acquired at an average price of £4 7s. 7d. per acre, and allotted in 5,261 farms, with a total capital value of £10,936,573. In addition, by September, 1923, about 2,870,000 acres comprised in large holdings within 15 miles of railway lines, contemplated or recently constructed, had been placed under proclamation, limiting the value at which they might be resumed by the Government for purposes of closer settlement.

Of similar character was the entry by the Government upon a scheme of irrigation in connection with the Murrumbidgee River (in 1906) to provide ultimately about 5,000 farms in perpetual lease, settlers being assisted financially and by the provision of factories to handle their products. Another large irrigation scheme has been initiated in connection with the Murray River. The Government also undertakes to finance the construction of shallow bores, weirs, &c., when settlers are willing to manage them, and in some cases, to repay by instalments the capital cost. The amount expended by the Government on water conservation and irrigation projects for farm purposes is shown on page 524 of this Year Book.

The marketing difficulties of the war period necessitated a further extension of Government activity. The disposal of most of the primary products

came within the purview of legislation, partly to assist settlers in their difficulties, and partly to secure control of supplies necessary for prosecuting the war. All Government control, however, had ceased by 1921.

In 1915 certain schemes of limited scope were initiated by the Departments of Land and Agriculture to assist farmers by loans to cultivate new areas and to relieve necessitous farmers. During the severe drought of 1919-20 a sum of £2,000,000 was made available by two special local loans to assist farmers whose ordinary commercial credit had been destroyed by the bad seasons. These advances were administered by the Rural Industries Board, instituted in December, 1919. In all, nearly £2,200,000 was advanced to about 12,000 farmers, and £1,700,000 had been repaid by March, 1923.

#### *Rural Credit and Community Settlement Scheme.*

In 1920 and 1921 a Select Committee of the Legislative Council sat under the chairmanship of Sir Joseph Carruthers to inquire into the condition of the agricultural industry in New South Wales. Among other matters exhaustively analysed was the system of rural finance. The Committee found the existing system of rural finance deficient in certain respects and recommended its improvement along co-operative lines.

During 1922 a Bill was prepared and submitted to Parliament by the former chairman of the Committee with a view to providing an efficient system of rural credit on co-operative principles, and to stimulating local development through community settlement. The scheme put forward provided for local co-operative societies and unions, and an extensive educational campaign was arranged through a series of conferences in the country districts to explain the proposed measure and to prepare the way for its adoption.

The keynote of the scheme contained in the Bill was the formation of new financial organisations with limited liability, including rural societies, associations, and unions. The purposes for which societies might be formed included the provision of rural credit, the promotion of community settlement and development, and co-operative trading in respect of agricultural and pastoral operations, including marketing and transport. A rural co-operative association consisting of registered co-operative societies might be formed for the purposes of supervising the affairs of member-societies and of promoting co-operation. By registration a co-operative society or union will become a body corporate. Co-operative credit societies may make loans only to members.

#### *Advances by Rural Industries Board.*

The Rural Industries Board was formed on 1st December, 1919 (a) to take over, consolidate, and collect all advances by the State for drought-relief, seed-wheat, and clearing land since 1915; and (b) to extend the scope of relief given to necessitous farmers during the existing drought. Relief measures were confined to cases where ordinary commercial assistance was not forthcoming, and a tentative limit of £500 per individual was fixed. In many cases the only available security was a promissory note which was accepted. Relief was granted to approximately 12,000 farmers, the total expenditure by the Board to 31st March, 1923, being £2,394,444.

Under all schemes the amounts advanced each year were approximately £411,184 in 1915; £1,660 in 1916; £450 in 1917; £30,076 for fallowing in 1918-19-20; £111,558 in 1919; £1,550,000 in 1920; £29,242 in 1921, and £15,707 in 1922 and to 31st March, 1923—a grand total of about £2,180,000. Of this sum £1,688,723 had been repaid by farmers to the 31st March, 1923.

The expenditure by the Rural Industries Board between 1st December, 1919, and 31st March, 1923, was distributed as follows:—

Head of Expenditure.					£
Seed Wheat	...	...	...	...	570,144
Fodder...	...	...	...	...	1,288,458
Household Supplies	...	...	...	...	60,197
Corn sacks	...	...	...	...	251,353
Cash Advances	...	...	...	...	185,652
Fallowing Advances...	...	...	...	...	24,936
Miscellaneous...	...	..	...	...	13,704
Total					£2,394,444

Considerable stocks of fodder were on hand and in transit in June, 1920, when the drought broke, and were disposed of otherwise than by advance to farmers.

Originally operations were restricted to assisting wheat-growers, but in 1920 assistance was also afforded to dairy farmers and small graziers.

#### *Advances by the Rural Bank.*

Under authority of the Government Savings Bank (Rural Bank) Act, 1920, steps were taken early in 1921 to establish a rural bank in New South Wales. The new bank was placed under the direction of the Commissioners of the Government Savings Bank, and it continued on an extended basis the operations of the Advances to Settlers Department, which was discontinued.

The primary object of the bank is to afford more extensive financial assistance to primary producers than is usually obtainable from other institutions, and thus to promote rural settlement and development.

The Commissioners are empowered to make advances upon mortgage of land in fee-simple, and of land held under conditional purchase or lease, settlement purchase or lease, and homestead grant or selection. The advances are made to repay existing encumbrances, to purchase land, to effect improvements, to utilise resources, or to build homes. By this means material assistance is afforded both to prospective and to established settlers.

Funds are obtainable from deposits at current account, fixed deposits, and the issue of deposit stock, rural bank debentures, and inscribed stock. Interest is allowed on fixed deposits at current bank rates, and current accounts are subject to trading bank conditions.

Loans are made only to persons engaged in primary production, or in closely-allied pursuits. The loans are of three kinds—(a) Overdrafts on current account; (b) instalment loans, repayable by equal half-yearly instalments of interest and principal extending over thirty-one years; and (c) fixed loans for limited terms. The security required may be land, either freehold or held on any Crown tenure, stock, plant, crops, wool, etc.

The Commissioners are empowered to make advances to assist the subdivision of large estates. Accordingly, loans up to 80 per cent. of the market value of farms are made on lands which have a freehold or certificated conditional purchase title, and are partially improved. Individual loans, however, are limited to a maximum of £2,000. In order to facilitate negotiations of sale, the Bank, after inquiry, issues certificates either to vendors or purchasers as to the amount it is prepared to advance on any land.

Some 140 branches of the bank have been opened throughout the State, usually in conjunction with a branch of the Savings Bank. The current business of the Advance Department was taken over, so that the bank commenced operations with outstanding advances amounting to nearly £3,250,000, secured by mortgages from 7,000 borrowers.

At 30th June, 1922, the amount of deposits with the Rural Bank at current account was £429,005, and £837,286 at fixed deposit, while Rural Bank and Treasury stock to the value of £4,273,973 had been sold; the outstanding advances were £5,363,189. By 30th June, 1923, the amount of deposits had increased to £1,481,206 at current account and £733,286 at fixed deposit, while outstanding advances amounted to £6,453,955.

The following table shows the transactions in long term and fixed loans by the Rural Bank in 1921-22 in comparison with those of the Advances to Settlers Department in previous years :—

Year ended 30th June.	Advances Made.			Repayments.		Balances Repayable.		
	Number.	Total Amount.	Average.	Number.	Total Amount.	Number.	Total Amount.	Average.
		£	£		£		£	£
1911*	838	331,693	395	743	185,420	3,754	1,074,359	286
1913*	1,386	771,272	556	414	116,476	5,094	2,051,132	403
1915	860	387,715	451	436	171,617	5,860	2,514,078	429
1919	589	260,255	442	520	204,558	6,171	2,599,751	421
1920	1,102	642,170	583	819	338,035	6,454	2,903,886	449
1921	1,365	813,525	596	577	293,540	7,242	3,423,871	473
1922	1,774	1,340,490	756	433	238,987	8,583	4,525,374	527

\* 31st December.

In addition, short term loans in the nature of overdraft are provided by the Rural Bank to settlers or persons carrying on industries immediately associated with rural pursuits. During the first year of operations (1921-22) the number of such advances was 1,383, amounting to £980,375.

#### *Other Advances to Settlers.*

Particulars of the number and amount of registered loans made on the security of live-stock, wool, and growing crops are published on page 216 of this Year Book. During 1922 the number of such advances was 8,621, and the total consideration £2,935,512, approximately one-half being mortgages on live stock.

## LAND LEGISLATION AND SETTLEMENT

### AREA OF NEW SOUTH WALES.

THE area of New South Wales, including Lord Howe Island (5 square miles) and the Federal Capital Territory (about 940 square miles), as stated previously in this Year Book, is estimated at 310,372 square miles, or 198,638,080 acres, being a little over two and a half times the combined area of Great Britain and Ireland. Excluding the surface covered by rivers and lakes, &c. (2,969,080 acres), the land area within the boundaries of the State is 195,669,000 acres, or about 305,733 square miles. The formal transfer on 1st January, 1911, of 583,660 acres at Yass-Canberra, and of 17,920 acres at Jervis Bay in 1915, to the Commonwealth Government as Federal Capital Territory, reduced the land surface of the State to 195,067,420 acres.

### LAND ADMINISTRATION.

At the foundation of the colony in 1788, the whole of the lands of the State vested in the British Crown.

The administration of public lands passed entirely under local control by virtue of the Constitution Act on the establishment of responsible government in 1856. Since that year the administration has been directed by a Secretary for Lands, who is a member of the State Parliament and of Cabinet. A Department of Lands was created and a permanent Under-Secretary appointed, with defined powers subordinate to those of the Minister. This system of administration may be defined as political control through a permanent salaried staff.

Control of the lands of the Western Division is vested in the Western Land Board, consisting of three commissioners.

The Eastern and Central Divisions are subdivided into ninety-one Land Districts, in each of which is stationed a Crown Land Agent, whose duty it is to receive applications and furnish information regarding land. Groups of these districts are arranged in larger areas, under the control of thirteen local Land Boards. These boards, sitting as open courts, hear and determine, in the first instance, many minor matters as provided by the Act and Regulations.

### *Land and Valuation Court.\**

A Land and Valuation Court, whose awards and judgments have the same force as those of the Supreme Court, was constituted in 1921 in continuance of the Land Appeal Court. To this Court are referred appeals, references, and a number of other matters under the Crown Lands Acts, the Pastures Protection Act, the Closer Settlement Acts, the Water Act, the Public Roads Act, and certain other Acts.

### *Territorial Divisions.*

The State is divided, for administrative purposes, into three territorial divisions, Eastern, Central, and Western, the boundary lines running approximately north and south, as shown on the map in the frontispiece. The conditions governing alienation and occupation of Crown lands differ in each of the three divisions of the State.

The Eastern Division has an area of 60,661,946 acres (exclusive of an area of 601,580 acres of Commonwealth territory), and includes a broad belt of

\* Further particulars of Local Land Boards, and of the Land and Valuation Court are published on page 303 of this Year Book.

land between the sea-coast and a line nearly parallel to it, thus embracing the coastal districts of the State, as well as the tablelands. In this division is excellent agricultural land, and it includes all the original centres of settlement most accessible to the markets of the State.

The Central Division embraces an area of 57,055,846 acres, extending from north to south between the western limit of the Eastern Division and a line drawn along the Macintyre and Darling Rivers, Marra Creek, the Bogan River, across to the River Lachlan, along that river to Balranald, and thence to the junction of the Edward River with the Murray. The area thus defined contains the eastern part of the upper basin of the Darling River in the northern part of the State, and the basins of the Lachlan, the Murrumbidgee, and other affluents of the Murray in the southern portions. The land in this division is still devoted mainly to pastoral pursuits, but about 3,000,000 acres are cultivated for wheat in a normal season.

The Western Division is situated between the western limit of the Central Division and the South Australian border. It contains an area of 80,318,708 acres, watered by the Darling River and its tributaries, and is mainly devoted to pastoral pursuits. Water conservation and irrigation, and railway and other means of communication may ultimately make agriculture possible over this large area, and at the present time special attention is being directed to this matter, but legislation in regard to the occupation of the lands of the district is based upon the assumption that for many years to come there will be little inducement for agricultural settlement.\*

#### PROGRESS OF ALIENATION.

A brief account of the spread of settlement appears on page 667. Details are shown hereunder of the areas of Crown lands disposed of in various ways.

From the early days of settlement until the year 1861 the Crown disposed of land, under prescribed conditions, by grants and by sales, so alienating, by the end of 1861, an aggregate area of 7,146,579 acres, made up as follows :—

	Acres.
1. By grants, and sales by private tender to close of 1831 ... ..	3,906,327
2. By grants in virtue of promises of early Governors made prior to 1831, from 1832-40 inclusive ... ..	171,071
3. By sales at auction, at 5s., 7s. 6d., and 10s. per acre, from 1832-38 inclusive ... ..	1,450,508
4. By sales at auction, at 12s. and upwards per acre, at Governor's discretion, from 1839-41 inclusive ... ..	371,447
5. By sales at auction, at 20s. per acre, from 1842-46 inclusive ... ..	20,250
6. By sales at auction and in respect of pre-emptive rights, from 1847-61 inclusive ... ..	1,219,375
7. By grants for public purposes, grants in virtue of promise of Governor made prior to the year 1831, and grants in exchange for lands resumed from 1841-61 inclusive ... ..	7,601
Total area alienated on 31st December, 1861 ... ..	7,146,579

In the year 1861 the first Crown Lands Act was passed, and from that date alienation was controlled by the laws of the State Government.

The areas absolutely alienated or virtually alienated under the various systems provided by the State Government to 30th June, 1922, are shown

\* See also page 692.

below, the area disposed of prior to 1862 being added in order to complete the statement :—

Area granted and sold by private tender and public auction at prices ranging from 5s. to 20s. per acre, prior to the year 1862 ... ..	acres. 7,146,579
Area sold by auction and other forms of sale, 1862 to 30th June, 1922, inclusive ... ..	14,942,271
Area sold under system of conditional purchase for which deeds issued, 1862 to 30th June, 1922, inclusive ... ..	19,970,073
Area granted under Volunteer Land Regulations of 1867 ... ..	172,198
Area dedicated for public and religious purposes, less resumptions, 1862 to 30th June, 1922... ..	241,743
Homestead selections and grants existing on 30th June, 1922 ... ..	895,298
Homestead Farms ... ..	2,622,307
Closer Settlement Act purchases ... ..	1,874
Suburban holding purchases (deeds issued) ... ..	576
Returned Soldiers' Special Holding purchases ... ..	43
Week-end lease purchases ... ..	26
Suburban Holdings ... ..	51,071
Returned Soldiers' Special Holdings under lease ... ..	26,567
Irrigation Farms (Murrumbidgee area) ... ..	108,240
Town Blocks (Murrumbidgee area) ... ..	175
Lands (acquired and Crown) alienated for Closer Settlement to 30th June, 1922 ... ..	2,457,915
<i>Less—</i>	48,636,956
Alienated and dedicated lands within Federal Capital Territory... ..	acres. 173,451
Area acquired for Closer Settlement, to 30th June, 1922	2,432,785
	2,606,236
Total area alienated, 30th June, 1922 ... ..	46,030,720
Area in process of alienation under system of conditional purchase standing good on 30th June, 1922 (exclusive of Federal Capital Territory) ... ..	18,436,627
Area of Suburban Holdings approved to purchase ... ..	5,806
Area of Returned Soldiers' Special Holdings approved to purchase ... ..	586
Area of Week-end leases under process of alienation ... ..	22
Total area alienated, and in process of alienation on 30th June, 1922 (exclusive of Federal Capital Territory) ... ..	64,473,761

As the records of early years are incomplete, it is not possible to separate the area alienated by grant from that sold by private tender. Free grants were discontinued from 31st January, 1912.

Some of the above tenures, such as homestead selections, homestead farms, suburban holdings, and irrigation blocks are perpetual leases conditional upon payment of rent and fulfilment of certain other requirements. Homestead selections and homestead farms, however, carry the right of conditional purchase. Conditional leases and conditional purchase leases, comprising 14,492,399 acres, are not included above; these are long-term leases, held almost exclusively in small areas, alienable to the extent of a home maintenance area at the option of the holder.

Under the provisions of the Crown Lands Amendment Act, 1912, the holder of a settlement purchase under the Closer Settlement Acts other than those acquired under the Closer Settlement Promotion Act, 1910, was permitted, under certain conditions, to convert such holding into a homestead farm. The Crown Lands Amendment Act, 1917, withdraws this right, and

provides that those conversions already made may, subject to the approval of the Minister, be re-converted into settlement purchase tenures.

The progress of absolute and virtual alienation by purchase and lease at various periods from 1861 to 30th June, 1922, is shown in the following table; which also indicates the limits of the area placed beyond State control:—

Year.	Area absolutely Alienated to end of year.	Area in course of Conditional Purchase at end of year.	Total area alienated and in course of alienation at end of year.	Area under certain Leases with statutory right† to purchase in whole or in part.	Total.
	acres.	acres.	acres.	acres.	acres.
1861	7,146,579	...	7,146,579	....	7,146,579
1871	8,630,604	2,280,000	10,910,604	....	10,910,604
1881	22,406,746	12,886,879	35,293,625	....	35,293,625
1891	23,775,410	19,793,321	43,568,731	19,899,168	63,467,899
1901	27,934,627	20,044,703	47,979,330	28,500,212	76,479,542
1906	33,470,512	16,499,823	49,970,335	23,589,532	73,559,867
1911	38,501,167	15,614,036	54,115,203	25,431,335	79,546,538
1916	41,172,383	18,315,095	59,487,478	23,678,609	83,166,087
1921	44,839,202	18,677,829*	63,517,031	22,366,298	85,883,329
1922	46,030,720	18,443,041*	64,473,761	22,700,214	87,173,975

\* Includes purchases of Suburban Holdings, Returned Soldiers' Special Holdings, and Week-end leases.

† As at 30th June, 1922.

Alienation of public lands was particularly rapid between 1871 and 1881, but slackened considerably in the next thirty years. Since 1911 alienation has been extensive, the area of land alienated or in course of alienation having increased by 10,358,558 acres.

The area shown above as being leased with a statutory right to purchase in whole or in part represents those leases which carried that right at 30th June, 1922. It omits from account all leases which were alienable prior to, but not during, 1922, and includes in previous years some leases not then convertible. In 1891, 1901 and 1906 there are included 8,665,035 acres, 10,953,388 acres and 2,616,472 acres respectively of homestead leases in the Western Division which have since been converted almost entirely into inalienable tenures under the Western Lands Act (1901). The classes of leases included in the classification are conditional, conditional purchase, Crown, settlement, prickly-pear, homestead (in the Western Division), town lands, and church and school lands leases. These leases are allotted usually in limited areas, but so much of them as, when combined with the freehold land of their holders, substantially exceeds a home maintenance area (as determined by the Local Land Board), remains within the disposal of the Crown upon the expiration of the lease. But practically the whole of the conditional and conditional purchase leases are beyond State control.

In addition, improvement leases, scrub leases and inferior lands leases, which are omitted from the above classification, are convertible to the extent of a home maintenance area. Upon allotment, the extent of an improvement lease may be as much as 20,480 acres, and scrub and inferior lands leases are unrestricted. It is probable that a considerable proportion of the total area under these tenures (4,494,212 acres in 1922) will ultimately revert to the Crown.

Certain other leases, such as the special lease, may be purchased, but it is within the discretion of the Minister to refuse to sell.



## AREA LEASED AT 30TH JUNE, 1922.

The total area of Crown lands leased on various terms to pastoral tenants and others at the end of June, 1922, amounted to 112,050,378 acres (including leases to miners under the Mining Act). The leases were classified as follows :—

Type of Lease.	Area, acres.	Type of Lease.	Area, acres.
To outgoing Pastoral Lessees	435,970	Special ... ..	828,684
Occupation License ... ..	3,476,108	Inferior Land ... ..	68,350
Conditional ... ..	14,169,851	Western Lands ... ..	75,882,983
Conditional Purchase... ..	322,548	Permissive Occupancy ... ..	1,915,317
Homestead ... ..	15,207	Prickly Pear ... ..	30,502
Annual ... ..	1,914,217	Mining Act ... ..	250,844
Settlement ... ..	4,032,936	Irrigation (Hay and Curlwaa)	13,268
Improvement ... ..	3,177,936	Other ... ..	13,178
Scrub ... ..	1,247,926		
Crown ... ..	4,128,533		
Snow Land ... ..	126,020	Total .. ..	112,050,378

The total available area of the State, as already stated, is 195,067,420 acres. Deducting the area alienated, and in process of alienation, 64,473,761 acres, and the area leased, 112,050,378 acres, making a total of 176,524,139 acres, there remained a balance of 18,543,281 acres, representing the area of land (not under water) neither alienated nor leased, and including roads and reserves for public purposes not otherwise occupied.

## RESERVES.

The total area of reserved lands in the State as at 30th June, 1922, was 19,487,014 acres. Some of these lands are reserved for a number of purposes. The following is a classification of reserves according to the principal purpose for which reserved :—

Class of Reserves.	Acres.
Travelling Stock ... ..	5,520,880
Water ... ..	818,052
Mining ... ..	1,351,232
Forest ... ..	3,249,141
Temporary Commons ... ..	455,221
Railway ... ..	55,639
Recreation and Parks ... ..	229,416
Pending Classification and Survey ... ..	3,875,334
For Conditional Purchase, within Gold-fields ... ..	655,627
Other ... ..	3,276,472
Total ... ..	19,487,014

Reserves are not necessarily unoccupied, considerable areas being held under annual, special, scrub, or forestry leases or on occupation license or permissive occupancy. Such are included under appropriate headings in the list of leasehold tenures shown above.

The total area of dedicated forest lands as at 30th June, 1922, was 5,371,994 acres, and in addition 1,479,792 acres were under forestry reserve, making a total of 6,851,786 acres. Of the area dedicated, 2,236,404 acres of land situated entirely within State forests was leased to graziers by the Forestry Department, and further areas comprising portions of leases not wholly within State forests were administered by the Department of Lands.

Of the total area of reserves, 14,239,578 acres, or 73 per cent., were situated in the eastern and central divisions of the State.

A revision of the reserved lands is being made in each Land District with the object of withdrawing from reserves any area the continued reservation of which is not required in the public interest.

## AREA AVAILABLE FOR SETTLEMENT.

The area of land within the disposal of the Crown without the necessity of resumptions and consequent compensation is not definitely ascertainable, since clauses providing for revocation or withdrawal have been inserted in a number of lease contracts, and considerable areas leased for long periods revert to the Crown periodically by the effluxion of time. Particulars of those areas are not available.

Apart from these, however, certain lands under reserve, in addition to the lands comprised in the following short leases may be considered to have been within the disposal of the Crown at 30th June, 1922 :—

Under Crown Lands Acts—						Area. acres.
Occupation license (including 48,086 acres in Western Division)	...	...	...	...	...	3,476,108
Annual lease (including 49,350 acres in Western Division)	...	...	...	...	...	1,914,217
Permissive occupancy	...	...	...	...	...	1,915,317
Under Western Lands Act—						
Occupation license (including preferential)	...	...	...	...	...	4,661,248
Permissive occupancy	...	...	...	...	...	1,330,360
Total						13,297,250

The area of land held under the above tenures at 30th June, 1921, was 15,989,675 acres.

With a view to classifying and bringing forward those areas which are suitable for settlement, systematic inspections of Crown lands are made in each district. To meet the demand for land, 1,819,353 acres, including 952,754 acres for Returned Soldiers, were made available during the year 1921-22 for the classes of holdings specified below :—

	For Ordinary Settlement. acres.	For Returned Soldiers. acres.	Total. acres.
For Crown Lease	354,766	105,798	460,564
Homestead Farms	186,926	251,722	438,648
Suburban Holdings	7,169	.....	7,169
Additional Holdings (ordinary)	190,690	848	191,538
Irrigation Farms and Allotments	6,369	32,231	38,600
Conditional Purchase (original)	...	...	...
Conditional Purchase and Conditional Lease	7,430	...	7,430
Homestead Selection (original)	40	...	40
Week-end Leases	316	...	316
Returned Soldiers' Special Holdings	...	4,238	4,238
Soldiers' Group Purchases	...	80,023	80,023
Settlement Purchases	17,387	4,036	21,423
Area acquired under Promotion provisions of the Closer Settlement Act	19,423	467,093	486,506
	790,516	945,979	1,736,495
Area gazetted prior to 30th June, 1921, but not available until after that date	76,083	6,775	82,853
Total	866,599	952,754	1,819,353

The total areas available for settlement under the various tenures on 30th June, 1922, were as follow :—

	For Ordinary Settlement. acres.	For Returned Soldiers. acres.	Total. acres.
For Crown Lease ... ..	1,559,080	23,150	1,582,230
Homestead Farms ... ..	75,086	477,246	552,332
Suburban Holdings ... ..	19,024	...	19,024
Conditional Purchase (Original) ...	4,040,794	...	4,040,794
Additional Holdings (Generally) ...	713,352	4,788	718,140
Week-end Leases ... ..	708	...	708
Town Lands Leases... ..	209	...	209
Returned Soldiers' Special Holdings ...	...	84,397*	84,397
Total ... ..	6,408,253	589,581	6,997,834

\* Includes 83,842 acres Special Lease.

A considerable proportion of the lands comprised in these holdings have been available for years, but have remained unselected, being apparently of an unattractive character.

## EASTERN AND CENTRAL LAND DIVISIONS.

### METHODS OF ACQUISITION AND OCCUPATION.

The acquisition and tenure of land in the Eastern and Central Land Divisions are controlled principally by the Crown Lands Act (consolidated in 1913), and its amendments together with regulations thereunder. In addition, the Closer Settlement Acts, Returned Soldiers' Settlement Acts, and the Forestry, Mining, Irrigation, and Prickly Pear Destruction Acts regulate certain tenures for specific purposes.

By these acts a great variety of tenures—more than thirty in number—have been created to suit the various circumstances of the lands and settlers of New South Wales, and the changing character of rural settlement.

The principal means by which Crown lands in the Eastern and Central Divisions and lands in the Western Division remaining under the Crown Lands Act may be acquired, and the tenures under which they may be held may be classified as follows :—

Non-Residential Tenures.	Tenures involving Residential Conditions.
Absolute Alienation.	
Auction sale.	Conditional purchase.
After auction purchase.	Settlement purchase.
Special non-competitive sales.	Returned soldiers' special holding.
Conditional purchase (40 to 320 acres)	Improvement purchase on goldfields.
Exchange.	
Leases Alienable wholly or in Part.	
Improvement lease.	Conditional lease.
Scrub lease.	Settlement lease.
Inferior lands lease.	Crown lease.
Special lease.	Homestead farm.‡
Special conditional purchase lease (up to 320 acres).	Homestead selection and grant.‡
Church and school lands lease.	Conditional purchase lease.
Town lands lease.‡	Suburban holding.‡
Week-end lease.‡	Residential lease on goldfields.
Prickly-pear lease.	Homestead lease.‡
Leases not Alienable.	
Annual lease.	Irrigation farm.‡
Occupation license.	Pastoral lease.*
Permissive occupancy.	Lease to outgoing pastoral lessees (section 18).
Occupation permit (forest lands).	
Forestry lease.	
Snow lease.	
Mineral and auriferous lease.	

\* No holdings. † Holdings in Western Division only ‡ Perpetual. || With consent of Minister.

## METHODS OF PURCHASE.

*Conditional Purchase.*

This method of alienation was introduced by the Crown Lands Act of 1861, and has become the most extensively used of all. Briefly, it is a system of Crown land sales by deposit and annual instalment. Other forms of sale are of small importance. All the principal leasehold tenures may be converted wholly or in part into conditional purchases, which may be considered the basal tenure of land settlement in New South Wales. The outstanding feature of the tenure is the limitation placed upon the area of land which may be held by a conditional purchaser during the currency of his purchase.

Lands available for conditional purchase comprise all Crown lands in the eastern and central land divisions other than those reserved, leased for a term of years within towns or other populated areas, or set apart for other classes of holdings. The area to be purchased under residential conditions may not be less than 40 acres, and must not exceed 1,280 acres in the eastern land division, and 2,560 acres in the central land division, or must not exceed 320 acres in either division when the buyer does not undertake to reside on the holding. Special areas without residential conditions, ranging up to 320 acres in the eastern land division, and up to 640 acres in the central land division, may also be made available.

Any conditional purchaser may take up the maximum area at once, if it is available, or may make a series of additional purchases as land becomes available. To facilitate this, a special tenure (conditional lease) has been created whereby a conditional purchaser may take up land not exceeding three times the area of his conditional purchase, and this may be converted into conditional purchase. The combined area so acquired may exceed the prescribed divisional limit only to make up a home maintenance area as determined in individual cases by the Local Land Board. Holders of freehold lands of at least 40 acres are also permitted to acquire lands as additional conditional purchases and conditional leases, provided the total area of each holding so increased does not exceed the divisional maximum or a home maintenance area.

Applicants for lands under this tenure must have attained the age of 16 years if males, and 18 years if females, or 21 years in either case if the holding is non-residential. Alien applicants must have resided in New South Wales for at least twelve months, and must become naturalised within five years of acquiring the purchase.

The price of the land for a residential purchase is £1 per acre, unless otherwise notified, in addition to the value of improvements (if any) assessed by the Local Land Board. A deposit of 5 per cent. of the purchase money must be paid in addition to survey fee and stamp duty. The first annual instalment is due at the end of three years from the date of application and, at the holder's option, may be at the rate of 9d. or 1s. for each £ of the price of the land. Such payment comprises repayment of principal with interest at the rate of  $2\frac{1}{2}$  per cent. per annum. The term of purchase, according to the rate of instalment paid, is forty-one or twenty-eight years. Payment for improvements may be made in fifteen equal annual instalments, including interest at the rate of 4 per cent.

The conditions to be observed by purchasers include *bona fide* residence upon the holding for five years after confirmation unless modified by the Local Land Board; fencing or other improvements, as prescribed, to the value of at least 30 per cent. of the price of the land (but not exceeding £384) effected within three years, and to the value of 50 per cent. of the

price of the land (but not exceeding £640) effected within five years of confirmation; and the payment of all instalments and prescribed charges.

The price of land taken up as a non-residential purchase is double that for a residential purchase, and the term of payment is twenty-seven years. Fencing to the value of £1 per acre, or other improvements to the value of £1 10s. per acre, must be effected within five years.

All applications connected with the purchases are considered by the Local Land Board, and certificates are issued to the holder by the chairman upon survey and confirmation, and a further certificate when all conditions, other than payment of balance of purchase money or survey fees have been fulfilled. After all conditions have been fulfilled a Crown grant is issued to the holder.

Under certain conditions a residential conditional purchase may be converted into a homestead farm, and a non-residential purchase into a residential purchase or a homestead farm.

Transfer may be made after the certificate has been issued, but purchases applied for after 31st January, 1909, may be transferred only with the consent of the Minister for Lands.

A conditional lease of not less than 40 acres may be obtained only by the holder of a conditional purchase subject to the various conditions set out above in respect of conditional purchases. The term of lease is forty years with the right to conversion of an area of not less than 40 acres to additional conditional purchase at any time after confirmation. The rent is payable annually at rates appraised by the Land Board, subject to reappraisalment at the end of each period of fifteen years. (Further particulars are given on page 709.)

*Number and Area of Conditional Purchases and Conditional Leases.*

Transactions in respect of original and additional conditional purchases from 1862 to 30th June, 1922, were as follows:—

Year ended 30th June.	Conditional Purchase—Applications made.		Completed Conditional Purchases.		Uncompleted Conditional Purchases.		Conditional Leases Gazetted.	
	No.	Area.	No.	Area.	No.	Area.	No.	Area.
		acres.		acres.		acres.		acres.
1862-1912 .. .. .	285,772	40,506,264	116,146	15,232,355	92,208	16,529,008	31,951	15,670,320
1913 .. .. .	783	103,844	3,265	406,019	92,183	17,307,305	1,212	1,093,114
1914 .. .. .	512	65,366	2,338	322,556	91,935	17,387,702	854	571,458
1915 .. .. .	362	46,175	2,354	304,012	90,904	18,035,210	391	319,362
1916 .. .. .	216	22,485	2,462	307,016	89,670	18,315,095	315	259,802
1917 .. .. .	168	25,761	2,881	357,828	88,493	18,693,429	133	122,137
1918 .. .. .	271	32,085	2,861	388,338	87,651	19,225,738	171	184,093
1919 .. .. .	511	75,370	3,608	559,779	86,203	19,435,807	269	263,791
1920 .. .. .	773	126,179	5,397	686,385	82,938	19,365,856	321	221,153
1921 .. .. .	533	90,573	4,792	664,522	78,971	18,672,521	351	188,478
1922 .. .. .	311	59,878	4,882	741,263	75,532	18,436,627	370	201,866
Total (as at 30th June, 1922)	290,212	41,153,930	151,076	19,970,073	75,532	18,436,627	23,831	14,091,229*

\* Excluding 132 leases comprising 78,622 acres not gazetted.

In 1908 the Conversion Act was passed, and since 1909 the number of selections has been reduced by forfeitures, cancellations, conversions into homestead selections, etc., and increased by conversions from various other tenures under the Crown Lands Act, so that the land wholly alienated, or in process of alienation, by conditional purchase, on 30th June, 1922, amounted

to 38,406,700 acres, contained in 226,608 purchases. Included in the foregoing are 151,076 completed purchases, covering 19,970,073 acres, upon which deeds have now been issued. The balance represents the number of purchases still in force, but upon which the conditions, payments, etc., have not yet been fulfilled, viz., 75,532, with an area of 18,436,627 acres.

Applications for conversion to mineral conditional purchase may, under the 1910 Act, be annulled or withdrawn, and all moneys, less authorised deductions for cost, refunded with the application.

#### *Auction Sales and After-auction Purchases.*

Crown lands are submitted for auction sale under two systems. Under the ordinary system the balance of purchase money is payable, without interest, within three months of the day of sale, while, under the deferred payment system, the balance is payable by instalments, with 5 per cent. interest, distributed over a period not exceeding ten years: in either case, not less than 10 per cent. of the purchase money must be deposited at the time of sale.

Auction sales were limited by law in 1884 to 200,000 acres in any one year. Town lands may be sold in blocks not exceeding half an acre, at an upset price of not less than £8 per acre; and suburban lands must not exceed 20 acres in one block, the minimum upset price being £2 10s. per acre. Country lands may be submitted in areas not exceeding 640 acres, the upset price being not less than 15s. per acre. The value of improvements on the land may be added to the upset price.

Town or suburban land or portions of country land of less than 40 acres each, which have passed at auction may be bought, with the Minister's consent, at the upset price; a deposit of 25 per cent. of such upset price is payable at the time of application, the balance being payable on the terms fixed for the auction sale.

Alienation by this method is now very restricted. Only 240 acres were sold by auction during 1921-22, realising £2,745. In addition, 545 acres were sold as after-auction purchases, realising £8,649.

#### *Improvement Purchases.*

Holders of miners' rights or of business licenses on a gold-field, being in authorised occupation by residence on land containing improvements, may purchase such land without competition. Improvements must include a residence or place of business, and be of the value of £8 per acre on town land, and of £2 10s. per acre on any other land. Alienation by this means has never been extensive. During 1921-22 the area sold was 51 acres for a total sum of £1,825.

#### *Special Non-Competitive Sales.*

These comprise land reclamations, rescissions of reservations, unnecessary roads, public land to which no way of access is available, or which is insufficient in area for conditional sale, etc., also residential leases, and includes area of Newcastle pasturage reserves on which balance of purchase money had been paid during the year. The amount so realised in 1921-22 was £8,898.

The owner in fee-simple of land having frontage to the sea, or to any tidal water or lake, who desires to reclaim and purchase any adjoining land lying below high-water mark, may apply to the Minister for Lands to do so, except in the case of Port Jackson, the control of which is vested in the Sydney Harbour Trust. Reclamations which might interrupt or interfere with navigation are not authorised.

*Area Alienated by Crown Land Sales.*

Particulars of areas disposed of under the three preceding headings; in quinquennial periods since 1900, are as follow :—

Years.	Auction Sales.	After-auction Sales.	Improvement Purchases.	Special Sales.	Total.
	acres.	acres.	acres.	acres.	acres.
1900-04* ...	261,328	10,004	942	3,782	276,056
1905-09 ...	80,430	15,801	181	5,817	102,229
1910-14 ...	16,768	6,994	269	9,976	34,007
1915-19 ...	20,527	2,709	241	9,743	33,220
1920 ...	5,661	1,037	28	1,642	8,368
1921 ...	296	360	22	2,036	2,714
1922 ...	241	545	51	2,118	2,955

\* Calendar years. Subsequent years are for year ended 30th June.

*Exchange of Land between the Crown and Private Owners.*

Before the granting of fixity of tenure in connection with pastoral leases, the lessees had made it a practice to secure portions of their runs by conditional purchases and purchases in fee-simple. The practice was disadvantageous to the public estate, because Crown lands were left in detached blocks severed by lessees' freehold properties; and the lessees realised that it would be convenient to them to gather their freeholds together in one or more consolidated blocks by surrender of the private lands in exchange for Crown lands elsewhere.

Under the provisions of the Crown Lands Consolidation Act, 1913, the Governor, with the consent of the owner, may exchange any Crown lands for any other lands of which a grant in fee simple has been issued.

The Governor may accept in exchange for Crown lands, lands in respect of which a balance of purchase money remains unpaid, if upon payment of such balance the right to a grant in fee simple becomes absolute. In any such case a grant of Crown lands in exchange will not be issued until the balance of purchase money has been duly paid.

Applications received under this head during the year 1921-22 numbered 36, and 124 applications were outstanding on the 30th June, 1921. Twenty-seven applications, embracing 50,991 acres, were granted in 1921-22, and 19 were either refused or withdrawn, etc.

*Settlement Purchase.*

Particulars of this method of acquiring land are shown on page 721 in relation to Closer Settlement.

## ALIENABLE LEASES.

The principal kinds of leases which may be converted under specified conditions to freehold tenures wholly or in part are the conditional lease, Crown lease, settlement lease, improvement lease, homestead farm, homestead selection and homestead grant, special lease, scrub lease, inferior lands lease, conditional purchase lease, prickly-pear lease, and homestead lease. Other leases of this class are suburban holding, residential lease, week-end lease, lease of town lands, and church and school lands lease.

*Conditional Leases.*

A conditional lease may be obtained by any holder of a conditional purchase (other than non-residential), or a conditional purchase within a special area in the Eastern Division. Lands available for conditional purchase are

also available for conditional lease, with the exception of lands in the Western Division, or within a special area or a reserve. Applications must be accompanied by a provisional rent of 2d. per acre and a survey fee, except where otherwise provided. The lease is for a period of forty years, at a rent determined by the Land Board, payable yearly in advance. Further particulars of conditional leases are shown on page 707 in relation to conditional purchases.

Applications for 182 leases, of an area of 88,065 acres, were lodged during 1921-22, and 311, including applications outstanding from the previous year, representing 107,755 acres, were confirmed.

Conditional leases, to the number of 703, embracing 279,040 acres, were converted into conditional purchase, and conditional leases containing an area of 8,166 acres, were created by conversion. Leases in existence at 30th June, 1922, numbered (gazetted) 23,831, embracing 14,091,229 acres, rent £195,798, and not gazetted (under provisional rent), 132 leases of 78,622 acres, and rent £655.

#### *Crown Leases.*

Crown leases were constituted under the Crown Lands Amendment Act, 1912, and lands are specially set apart by notification in the *Gazette* as available for Crown lease. Crown lands available for conditional purchase (unless otherwise specified in the *Gazette*) are also available for Crown lease. Land may be set apart for Crown lease to be acquired only as additional holdings. The term of lease is forty-five years, and the annual rent  $1\frac{1}{4}$  per cent. of the capital value, as determined every fifteen years. The rent payable for the first year may be remitted if, in addition to the improvements required as a condition of the lease, an equal sum be spent by the lessee in improving the land. The lessee is required to reside on the land for five years, and during the last five years of the lease, unless debarred by notification setting the land apart, may apply to convert into a homestead farm so much of the land as will not exceed a home-maintenance area. Upon expiration of a Crown lease the last holder thereof possesses tenant rights in improvements other than Crown improvements. Under certain conditions, conversion may also be made into a conditional purchase, with or without a conditional lease. The lease may be protected against sale for debt in certain circumstances. Any person qualified to apply for a homestead farm may apply for a Crown lease.

Operations under this class of lease during the past ten years were as follow:—

Year ended 30th June.	Application.		Confirmed.		Leases current at 30th June.		
	No.	Area.	No.	Area.	No.	Area.	Rent.
		acres.		acres.		acres.	£
1913	477	554,424	278	390,096	330	555,864	5,621
1914	836	697,425	493	356,727	805	880,785	9,259
1915	628	643,189	598	487,155	1,600	1,563,684	16,114
1916	571	864,158	501	780,373	1,760	1,896,765	21,561
1917	541	595,409	445*	441,313	2,033	2,134,446	24,845
1918	463	500,386	291*	285,248	2,337	2,449,587	28,292
1919	628	934,072	313*	341,324	2,565	2,694,879	31,303
1920	1,039	1,399,270	419*	593,554	2,841	3,092,904	34,521
1921	686	790,926	548*	671,247	3,186	3,664,798	38,512
1922	424	555,629	604*	700,419	3,384	4,128,533	38,860

\* Includes 40 original leases of an area of 99,885 acres, and annual rental of £1,448, for returned soldiers in 1917; 21 of 66,197 acres, and rental £948, in 1918; 36 of 83,943 acres, and rental £1,190, in 1919; 61 of 171,882 acres, and rental £1,654, in 1920; 29 of 70,440 acres, and rental £619, in 1921, and 24 of 41,317, and rental £366 in 1922. In addition to these, additional areas were confirmed for 10,311 acres and rental £145, in 1919; 381 acres, rental £4, in 1920; 1,606 acres, rental £14, in 1921; and 380 acres, rental £4 in 1922.



*Settlement Leases.*

Under this tenure farms gazetted as available for settlement lease were obtainable on application, accompanied by a deposit consisting of six months' rent and at least one-tenth of survey fee. Successful applicants are required to reside for a term of five years upon their holding.

During 1921-22 no applications were received for original lease, and 13 applications for additional leases relating to 21,246 acres were lodged. Three applications of 1,292 acres were confirmed. Twenty-three settlement leases of 18,238 acres were created by conversion, and 28 leases for an area of 109,098 acres were converted into other tenures. After making allowance for leases forfeited, etc., and subdivision, there remained current at 30th June, 1922, 1,491 leases, comprising 4,032,936 acres, and rent, £55,257.

Under the Crown Lands Act of 1903, the holder of a settlement lease may convert such lease into a conditional purchase, or into a conditional purchase and conditional lease under certain provisions, but the area of the land to be converted into conditional purchase may not exceed a home-maintenance area.

*Improvement Leases.*

An improvement lease may consist of any land in the Eastern or Central Divisions considered unsuitable for closer settlement until improved. They may be obtained only by auction or tender, after-auction tender, or after-tender tender. The rent is payable annually, and the lease is for a period of twenty-eight years, with an area not exceeding 20,480 acres. Upon the expiration of the lease the last holder is deemed to have tenant-right in improvements. During the last year of the lease the lessee may apply for a homestead grant of an area not in excess of a home maintenance area, including the area on which his dwelling-house is erected. Should the Advisory Board, constituted under the Closer Settlement Act, 1907, report that land comprised in an improvement lease or scrub lease is suitable for closer settlement, the Minister may resume the lease, the lessee being compensated.

During 1921-22 no leases were sold or let by tender, and no leases under improvement conditions were granted. Eleven improvement leases were converted into homestead selections. After allowance has been made for leases, which were forfeited, voided, surrendered, expired, resumed, or transferred to the Forestry Commission, there remained current at 30th June, 1922, 692 leases with an area of 3,177,936 acres, and rental £21,562.

*Homestead Farm.*

This tenure was created in 1912. The title of a homestead farm is a lease in perpetuity. Annual rent is charged at the rate of 2½ per cent. of the capital value, but for the first five years the holder, in lieu of payment of rent, may expend an equal amount on improvements of a permanent character, which (except boundary fencing) are in addition to those which are required otherwise as a condition of improvement or expenditure of the lease. The capital value of the holding is subject to reappraisal after the first twenty-five years and subsequently at intervals of twenty years.

Crown lands available for conditional purchase (unless otherwise notified in the *Gazette*) are also available for homestead farm. Land may be set apart for additional homestead farms, but is available only to applicants whose total holding if successful would not substantially exceed a home maintenance area. Any Crown lands may be set apart for disposal as homestead farms before survey. There is no definite limit placed on the area of a homestead farm, but it is generally notified as available in home maintenance areas.

A person—including an alien—of a minimum age of 16 years, if a male, or 18 years, if a female, may apply for a homestead farm, provided that the applicant does not hold under any tenure—except lease which has less than five years to run, and does not confer a right to purchase the freehold—an area of land which, added to the area of the homestead farm, would substantially exceed a home-maintenance area. In estimating what constitutes a home maintenance area, the joint area held by husband and wife (unless judicially separated) is taken into account as lands held by one person. An alien becoming the holder of a homestead farm, suburban holding, Crown lease, or irrigation farm, must become naturalised within three years. A married woman may apply if possessed of a separate estate. Persons who have selected previously are disqualified in certain circumstances.

A condition of five years' residence is attached to every homestead farm, but in special cases residence in a town or village, or anywhere within reasonable working distance, may be allowed. Residence may be permitted on a holding of a member of the same family, or on another of the selector's holdings within reasonable working distance. Suspensions or remissions may be granted for such periods as determined by the Land Board. In certain cases a wife may carry out residence on her husband's holding, or, conversely, a husband may carry out residence on his wife's holding.

A perpetual lease grant is issued after the expiration of five years from confirmation of the application, if the holder has complied with all required conditions.

Applications received for homestead farms and those dealt with during the last ten years are as follow :—

Year ended 30th June.	Applications.				Created by Conversion from other tenures.		Reversal of forfeiture and increased area.		Less—Forfeited, decrease in area, and conversions into other tenures.		Homestead Farms in existence at end of year.	
	Received.		Confirmed.									
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
		acres.		acres.		acres.		acres.		acres.		acres.
1913	400	217,186	356	203,365	19	10,041	...	...	...	...	421	241,221
1914	468	284,640	358	221,576	9	7,337	...	...	32	19,635	756	450,499
1915	605	467,873	437	327,098	11	4,550	1	210	50	33,439	1,155	748,918
1916	372	281,685	348	252,166	6	3,848	...	...	57	35,479	1,452	969,453
1917	271	181,722	167*	115,259	2	1,209	2	486	75	49,722	1,548	1,096,685
1918	245	186,853	158*	89,020	...	...	4	2,783	82	46,866	1,628	1,081,622
1919	498	572,713	339*	383,833	3	1,602	4	2,379	107	58,824	1,867	1,410,612
1920	840	989,884	491*	507,417	5	3,211	1	857	76	32,988	2,288	1,889,109
1921	573	562,797	449*	437,713	1	151	2	1,056	69	31,181	2,671	2,296,848
1922	473	570,582	375*	378,180	8	9,505	1	238	93	62,464	2,961	2,622,307

\* Includes 82 original farms of 64,476 acres for Returned Soldiers in 1916-17; 51 of 36,208 acres in 1917-18, 164 of 275,611 in 1918-19, 273 of 315,520 in 1919-20, 194 of 244,393 in 1920-21, and 86 of 110,952 in 1921-22. Three applications for additional areas of 526 acres were also confirmed in 1917-18, 7 applications for 3,413 acres in 1918-19, 10 for 13,078 acres in 1919-20, 5 for 2,273 acres in 1920-21, and 4 for 4,987 acres in 1921-22.

The holder of a conditional purchase, or conditional purchase and conditional lease, or homestead selection, or homestead grant, or conditional purchase lease, under certain conditions, may convert such holding into a homestead farm. A homestead farm may be protected against sale for debt in certain circumstances. Under certain conditions a homestead farm may be converted into a conditional purchase lease or into a conditional purchase, with or without a conditional lease. A homestead farm, which is a conversion of a settlement purchase under provision now repealed, may be reconverted into a settlement purchase.

*Homestead Selection and Homestead Grant.*

The appropriation of areas for homestead selection was a prominent feature of the Act of 1895, the land chosen for subdivision being generally agricultural land, and the maximum area of holdings limited to 1,280 acres. The tenure is lease in perpetuity with rent at the rate of  $1\frac{1}{4}$  per cent. per annum for the first five years or until the issue of the homestead grant, when it is raised to  $2\frac{1}{2}$  per cent. or to  $3\frac{1}{2}$  per cent. of the appraised value if residence is performed by deputy. Certain residential and improvement conditions were imposed, and on compliance with these for a term of five years a homestead grant is issued.

Lands are not now made available for homestead selections, such tenure having been practically replaced by that of homestead farm. Applications dealt with after 1912, are either in connection with areas previously set apart for homestead selection, or as additional areas, principally the latter. A large number of persons have, however, selected under this form of holding, as will be seen from the following statement which shows the applications and confirmations in regard to homestead selections and homestead grants issued up to 30th June, 1922.

Year ended 30th June.	Homestead Selections.				Homestead Grants issued.		Homestead Selections in existence.	
	Applications.		Confirmations.					
	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.
1895 to 1912	9,955	3,799,567	7,819	2,727,097	4,511	1,839,780	...	...
1913 ...	65	19,595	106	30,879	175	55,377	4,071	1,480,834
1914 ...	19	4,941	22	5,707	231	39,231	3,868	1,396,911
1915 ...	30	16,983	18	7,233	198	59,919	3,788	1,365,719
1916 ...	8	3,141	17	7,559	161	48,479	3,694	1,317,120
1917 ...	5	3,970	5	1,337	212	54,791	3,585	1,256,036
1918 ...	24	18,175	10	5,535	189	49,306	3,295	1,055,915
1919 ...	20	17,266	23	19,232	172	30,807	3,091	985,914
1920 ...	23	15,365	8	9,690	55	20,502	2,936	912,573
1921 ...	21	14,069	21	7,819	25	9,004	2,863	895,330
1922 ...	15	9,090	9	7,507	33	17,896	2,803	895,298
Total ...	10,185	3,922,162	8,058	2,829,595	5,962	2,225,092	2,803	895,298

On account of adjustments for conversions to and from other tenures, forfeitures, &c., the number and area of homestead selections and grants in existence have been greatly reduced.

Under the Crown Lands (Amendment) Acts, of the years 1908 and 1912, a homestead selection or grant may be converted into a homestead farm, or a conditional purchase lease, or a conditional purchase, or a conditional purchase and conditional lease, provided the area contained in such conditional lease does not exceed three times the area in the conditional purchase.

*Leases of Scrub and Inferior Lands.*

Scrub leases may be obtained by application, by auction, by tender, by after-auction tender, or by after-tender tender, but inferior lands leases may be acquired only by auction or by tender, after-auction tender, or after-tender tender. There is no limitation as to area, and in the case of a scrub lease obtained by application the rent is appraised by the Local Land Board. The initial rent of an inferior-lands lease prevails throughout the whole term; but the terms of a scrub lease may be divided into periods, the rent for each period being determined by reappraisal. The term of each class of lease may not exceed twenty-one years, but may be extended to twenty-eight

years. The holder of a scrub lease must take such steps as the Land Board may direct for the purpose of destroying the scrub, and keeping the land clear afterwards. During the last year of either class of lease, application may be made for a homestead grant of an area not in excess of a home-maintenance area, but where the lease does not substantially exceed a home-maintenance area it may be so converted at any time during its currency.

There were in existence at 30th June, 1922, 207 scrub leases with an area of 1,247,926 acres, and rental of £5,378, and 28 inferior land leases, embracing 68,350 acres, and rent, £240.

#### *Special Leases.*

Special leases are issued chiefly to meet cases where land is required for some industrial or business purpose, but areas up to 1,920 acres may be made available for agriculture or grazing. A special lease may be obtained by application, auction, or otherwise, but the term of the lease may not exceed twenty-eight years. Conditions as to rent, residence, improvements, &c., in each case are determined by the Minister.

The Crown Lands Act, passed in 1908, provides for the conversion of a special lease by a qualified leaseholder with the consent of the Minister, into a conditional purchase lease; an original or additional conditional purchase; an original or additional homestead selection; an original or additional settlement lease; a conditional lease; or a homestead farm.

The number of special leases granted during 1921-22 numbered 987 with a total area of 182,119 acres; and 406 leases, representing 75,185 acres, were converted into other tenures. After allowance has been made for leases which were terminated, were forfeited, surrendered, &c., and those which expired by effluxion of time, 7,299 leases (exclusive of leases within the Commonwealth territory) with an area of 828,684 acres and rental of £42,238, were current at 30th June, 1922.

#### *Conditional Purchase Leases.*

This form of tenure was created in 1905; but, as in the case of homestead selections and settlement leases, it is obsolete for the purposes of selection, as lands are not now made available under it. There are, however, considerable numbers of conditional purchase leases still in existence.

The tenure is leasehold for forty years with rent at 2½ per cent. per annum of the capital value re-appraised at intervals of fifteen years. No fixed limit was placed on areas made available, but conditions as to residence, cultivation, &c., were prescribed. Conversion to the tenures of conditional purchase and homestead farms are permitted.

A special conditional purchase lease may be granted without obligation of residence in respect of areas not exceeding 320 acres on condition that improvements to the value of 10s. or more per acre as determined by the Minister are effected within three years of application.

No applications were received for original leases, only three of 2,064 acres being received for additional conditional purchase leases during the year 1921-22; and one additional of 278 acres was confirmed. One application for 280 acres for a special conditional purchase lease was also received, and none were confirmed during the year. Two leases of 131 acres were converted from another tenure, and one lease added by sub-division. Two leases of 199 acres were forfeited. Sixty-seven leases of 46,301 acres were converted into conditional purchases. The leases holding good at 30th June, 1922, numbered 435 with an area of 322,548 acres, the annual rent amounting to £9,139.

*Prickly Pear Leases.*

Under the Prickly Pear Destruction Act, 1901, certain common or Crown lands infested with prickly pear may be offered for lease by auction or tender, and may be let for a term not exceeding 21 years, subject to prescribed conditions as to improvements, rent, &c. At 30th June, 1922, the area so leased was 30,502 acres, at a total annual rental of £383.

*Homestead Leases.*

This form of tenure is rapidly becoming obsolete. Formerly it applied to large areas of land in the Western Division, which have now been brought under the Western Lands Act. At 30th June, 1922, there were two homestead leases under the Crown Lands Act, with a combined area of 15,207 acres, at an annual rental of £23. Both were situated in the Western Lands Division.

*Suburban Holdings.*

Any suburban Crown lands, or Crown land within population boundaries, or within the Newcastle pasturage reserve, or any other Crown land, may be set apart for disposal by way of suburban holding.

The tenure of a suburban holding is lease in perpetuity with certain conditions as to residence and perpetual payment of rent. Under certain conditions the leaseholder may be permitted to purchase his holding.

The area of a suburban holding is determined by the Minister for Lands; the rent—minimum, 5s. per annum—is calculated at the rate of  $2\frac{1}{2}$  per cent. of the capital value, to be appraised for each period of twenty years. Males under 16 years and females under 18 years, are disqualified from applying. A married woman may, in certain cases, apply, provided her husband has not acquired a suburban holding. After the expiration of five years from date of confirmation, and subject to fulfilment of all conditions, a perpetual lease grant is issued. The right to purchase suburban holdings was conferred in 1917.

No rent is chargeable on holdings in course of purchase, the principal with interest at the rate of  $2\frac{1}{2}$  per cent. per annum on the balance being paid by annual instalments extending over a period of 10 years.

The number of confirmations of and purchases of Suburban Holdings during the past ten years, were as under:—

Year ended 30th June.	Confirmations.		Suburban Holdings in existence at the end of year.		Annual Rent.	Purchases approved to the end of the year.		
	No.	Area.	No.	Area.		No.	Area.	Price.
		acres.		acres.	£		acres.	£
1913 ...	373	8,730	388	9,731	1,146	...	...	...
1914 ...	570	13,415	902	22,114	2,473	...	...	...
1915 ...	477	9,299	1,311	30,717	3,495	...	...	...
1916 ...	400	6,775	1,535	34,110	4,043	...	...	...
1917 ...	230	2,937	1,662	36,631	4,246	...	...	...
1918 ...	186	3,318	1,804	38,354	4,381	11	289	915
1919 ...	183	3,226	1,809	39,170	4,670	136	2,057	12,035
1920 ...	181	4,073	1,826	40,198	4,401	259	4,252	23,207
1921 ...	282	6,764	1,995	45,475	4,830	333	5,160	30,446
1922 ...	415	9,121	2,260	51,071	5,470	397	6,382	35,535

The average size of suburban holdings in existence at 30th June, 1922, was 23 acres, the average size of such holdings sold was 16 acres, and the average price £5 10s. per acre.

*Residential Leases.*

The holder of a "miner's right" within a gold or mineral field may obtain a residential lease. A provisional rent of 1s. per acre is charged, the maximum area allowed is 20 acres, and the longest term of the lease twenty-eight years; the annual rent is appraised by the Land Board. The principal conditions of the lease are residence during its currency, and the erection within twelve months of necessary buildings and fences. Tenant-right in improvements is conferred upon the lessee. The holder of any residential lease may, after five years, purchase the land with the consent of the Minister.

There were 907 leases embracing 12,541 acres and a rental of £1,629 current at 30th June, 1922.

*Week-end Leases.*

This tenure, created by the Crown Lands Amendment Act, 1916, is a lease in perpetuity of an area not exceeding 60 acres, subject to payment of rent at the rate of  $2\frac{1}{2}$  per cent. of the capital value, to the effecting of substantial improvements worth £1 per acre within five years from confirmation, and to the performance of such special conditions as may be notified. Residence is not necessary. The minimum rent is £1. Any adult (except a married woman not judicially separated from her husband) may apply, but persons who already hold land within areas defined in a notification setting apart the land for week-end leases, are generally disqualified.

Week-end leases, on approval by the Minister, may be purchased, and payment must be made within three months from date of demand, or within such further period as the Minister may allow.

Transfers may be made at any time with the Minister's consent, but must be to a qualified person, except in cases of devolution under a will or intestacy. The consideration for a transfer must not exceed the capital value of the improvements on the land.

During the year ended 30th June, 1922, 34 applications for 130 acres were received, and confirmation was made in the case of 31 for an area of 48 acres at an annual rental of £31. At 30th June, 1922, these leases numbered 133, of an area of 487 acres, and annual rental £140. In addition, deeds of purchase had been issued for 10 leases of 26 acres, and approval to purchase granted in the case of three leases of 21 acres.

*Leases of Town Lands.*

Crown lands within the boundaries of any town may be leased by public auction or by tender. The lease is perpetual, and the area included must not exceed half an acre. The amount bid at auction or offered by tender (not being less than the upset value) is the capital value on which the annual rent at the rate of  $2\frac{1}{2}$  per cent. is based for the first period of twenty years. The capital value for each subsequent twenty years' period is determined by the Land Board.

The lease may contain such covenants and provisions as may be gazetted prior to sale or tender. Residence is not necessary. No person is allowed to hold more than one lease, unless with the permission of the Minister on recommendation by the Land Board. The holder of a town lease may be allowed to purchase.

In the year 1921-22, 91 lots containing 32 acres were either sold at auction or successfully tendered for, the annual rent being £74. After-auction tenders were received and accepted for 122 lots of an area of 38 acres, and annual rental of £195. On 30th June, 1922, there were 424 leases, containing  $139\frac{1}{2}$  acres, the annual rental being £482.

*Church and School Lands Leases.*

The history of Church and School land leases showing the present status of leaseholders, was published on page 859 of the Year Book for 1921.

The total area of Church and School lands held under lease at 30th June, 1922, in the Eastern Division, was 11 acres, at a rental of £330 per annum, the subdivision being as follow :—

	No.	Area. acres.	Rent. £
Agricultural ...	1	1	1
Ninety-nine Year ...	37	10	326
Water Races ...	1	10 miles (about)	3
Total ...	39	11	330

*INALIENABLE LEASES.*

The term “inalienable leases” is here used to signify that the conditions of the leases so classified do not permit the leaseholder to purchase any part of his lease nor to convert into another leasehold tenure involving the right of purchase.

On the foundation of the colony, all lands vested in the Crown, and for many years permits to occupy unsold Crown lands were issued on various conditions.

The principal inalienable tenures now in existence are described below.

*Annual Leases.*

Unoccupied lands, not reserved from lease, may be obtained for pastoral purposes as annual leases, on application, or they may be offered by auction or tender. They may be obtained also by after-auction tender, or after-tender tender. No conditions of residence or improvement are attached to annual leases, which convey no security of tenure, the land being alienable by conditional purchase, auction sale, &c. The area in any one lease is restricted to 1,920 acres. In certain circumstances an annual lease may be converted into a lease under improvement conditions for a term not exceeding ten years.

The number of annual leases current at 30th June, 1922, was 4,977, embracing 1,914,217 acres, with an annual rent of £15,524.

*18th Section and Pastoral Leases.*

Under the Crown Lands Amendment Act of 1903, the registered holder of any pastoral lease, preferential occupation license, or occupation license, could apply for a lease, for not more than twenty-eight years, of an area not exceeding one-third of the total area of the land comprised within the lease or license, subject to such rent, conditions or improvements, and withdrawal for settlement as may be determined. These are known as 18th Section Leases, having been granted under Section 18, Act of 1903, which has now been repealed.

At 30th June, 1922, these leases, also known as “Leases to Outgoing Pastoral Lessess,” numbered 80, with an area of 435,970 acres, and rental of £3,423. There were no pastoral leases in existence on 30th June, 1922, in the Western Division, which had not been brought under the provisions of the Western Lands Act.

*Irrigation Farms and Leases.*

Particulars of these tenures and of lands held under them are shown on a later page, where the irrigation areas are specially treated.

*Forestry Leases and Occupation Permits.*

Crown lands, whether leased or unoccupied, situated entirely within dedicated forests are controlled exclusively by the Forestry Commission, which has power to lease or otherwise permit their use for approved purposes.

Forestry leases limited to twenty years have been granted for grazing purposes, and occupation permits usually on an annual tenancy, but sometimes for a period of fourteen years have been granted for grazing, bee-farming, and forest saw-mills. For grazing purposes the rent is usually fixed in relation to the grazing capacity of the land.

The total area of forestry leases and occupation permits wholly within State forests, at 30th June, 1922, was 2,075,669 acres under the Forestry Acts, and 160,735 acres under the Crown Lands Acts; in addition, there were portions of other leases not wholly within State forests, particulars of which are not available.

*Snow Leases.*

Vacant Crown lands on the Southern Highlands, which for a portion of each year are usually covered with snow, and are thereby unfit for continuous use or occupation, may be leased by auction or tender, by after-auction tender, or by after-tender tender as snow leases. Not more than one snow lease may be held by the same person. The maximum area is 10,240 acres. The term of the lease is seven years, but may be extended for three years.

At 30th June, 1922, there were 19 leases current, embracing 126,020 acres; and rent, £1,097, one lease of 3,000 acres having been transferred to the Forestry Commission.

*Mineral and Auriferous Leases.*

There were at 30th June, 1922, 249,678 acres held as mineral and auriferous leases, exclusive of leases to mine on private lands. Permits to mine under roads and reserves covered an area of 1,166 acres.

*Occupation Licenses.*

Occupation licenses may be of two kinds, (a) preferential occupation licenses, consisting of the area within an expired pastoral lease, and (b) ordinary occupation licenses, which relate to the parts of the holdings formerly known as resumed areas. They may be acquired by auction or tender, after-auction tender, or after-tender tender. Occupation licenses extend from January to December, being renewable annually at a rent determined by the Land Board.

An occupation license entitles the holder to occupy Crown lands so granted for grazing purposes, but it does not exempt such lands from sale or lease of any other kind. The licensee, however, is granted tenant rights in any improvements made to his holding with the written consent of the Crown.

The area under occupation license (Crown Lands Act) was represented at 30th June, 1922, by ordinary 580 of 2,782,896 acres, rental £6,334; and preferential 288 leases, representing 693,212 acres, and rent £2,608.

*Permissive Occupancy.*

This tenure is a form of tenancy at will from the Crown, at a fixed rental for a short period, terminable at any time by a written demand of possession from the Secretary for Lands or by written notice from the tenant. The occupant has tenant rights in improvements effected by him.

The number of permissive occupancies in existence at 30th June, 1922, was 4,620, comprising 1,915,317 acres.



## CONVERSION OF TENURES.

In describing the various methods of acquisition and occupation, details have been given of provisions of the Crown Lands Acts, which confer on certain holders of Crown lands the right of conversion into more desirable tenures. The following statement shows the number and area of holdings, application to convert which was confirmed during the year 1921-22 :—

Tenure of Holding Converted.	New Tenure Granted.													
	Conditional Purchase.		Con- ditional Purchase and associated Con- ditional Lease.		Con- ditional and Con- ditional Purchase Leases.		Home- stead Selection.		Settle- ment Lease.		Home- stead Farm.		Total Confirma- tions.	
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.
Conditional Leases	703	279,040	..	—	..	..	..	..	..	..	..	..	703	279,040
Conditional Purchase Leases	67	46,301	..	—	..	..	..	..	..	..	2	2,545	67	46,301
Conditional Purchase Leases	..	..	..	..	..	..	..	..	..	..	..	..	2	2,545
Homestead Selections or Grants	94	42,232	5	4,630	1	53	..	..	..	..	..	..	100	46,915
Settlement Leases	8	18,777	30	90,321	..	..	..	..	..	..	..	..	38	109,098
Non-residential Condi- tional Purchases	8	963	..	..	..	..	..	..	..	..	..	..	8	963
Special Leases	333	38,486	..	..	29	8,244	15	3,257	23	18,238	6	6,900	406	75,185
Prickly-pear Leases	..	..	..	..	..	..	1	350	..	..	..	..	1	350
Scrub Leases	..	..	..	..	..	..	2	8,579	..	..	..	..	2	8,579
Improvement Leases	..	..	..	..	..	..	11	27,185	..	..	..	..	11	27,185
Crown Leases	59	21,419	14	22,197	..	..	..	..	..	..	..	..	73	43,616
Homestead Farms..	30	7,800	7	5,775	..	..	..	..	..	..	..	..	38	14,024
Total	1,302	455,018	56	122,923	30	8,297	29	39,371	23	18,238	8	9,505	1,449	653,801
				*		†								†

\* Includes 56 associated Conditional Leases, 84,854 acres.

† Includes 2 Conditional Purchase Leases, 131 acres.

‡ Including 1 Homestead Farm converted into a Settlement Purchase of 449 acres.

Particulars of the number and area of new tenures obtained by conversion during each of the past ten years are shown below :—

## New Tenure Confirmed.

Year ended 30th June.	Conditional Purchase.*		Conditional Purchase and Associated Conditional Lease.†		Con- ditional and Con- ditional Purchase Lease.		Home- stead Selection.		Settle- ment Lease.		Home- stead Farm.		Total Confirmations.	
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
		acres.		acres.		acres.		acres.		acres.		acres.		acres.
1913	2,226	927,208	166	516,437	20	3,427	12	4,379	7	1,834	19	9,944	2,450	1,463,229
1914	1,689	730,639	87	294,773	10	1,367	12	3,875	3	584	9	7,337	1,810	1,038,555
1915	1,095	420,933	54	196,325	12	2,265	8	2,503	1	31	11	4,550	1,181	626,607
1916	1,216	547,347	46	165,375	13	5,092	11	4,597	2	600	6	3,848	1,294	726,859
1917	1,492	636,809	43	162,842	25	15,831	12	2,641	12	3,408	2	1,209	1,586	872,740
1918	1,880	863,461	87	213,849	12	4,272	6	2,272	..	..	..	..	1,985	1,083,854
1919	1,952	711,042	64	157,021	32	20,213	1	6,100	1	233	3	1,602	2,053	896,261
1920	1,659	511,315	96	217,835	30	6,099	7	3,178	3	380	5	3,211	1,800	742,018
1921	1,598	501,861	78	174,756	34	11,074	23	36,986	3	2,894	1	151	1,737	727,722
1922	1,302	455,018	56	122,923	30	8,297	29	39,371	23	18,238	8	9,505	1,449	653,801

\* Including non-residential conditional purchases.

† Including 1 homestead farm converted to a settlement purchase of 449 acres.

## WESTERN LAND DIVISION.

The lands of the Western Division, comprising more than 80,000,000 acres, or two-fifths of the area of the State, are for the most part sparsely settled, and occupation is somewhat precarious on account of the low and uncertain rainfall.



In addition, there were 2,029,121 acres of alienated land; 1,138,989 acres of unoccupied land of low grade; 990,121 acres of unalienated town lands, beds of rivers, commonages, &c.; and 92,869 acres of new leases being issued

Of the above leases, 55,485,279 were granted under the Crown Lands Acts and subsequently brought under the Western Lands Acts, and 19,160,213 were new leases issued under the Western Lands Acts.

#### CLOSER SETTLEMENT.

The circumstances leading to the adoption of what is known as the "Closer Settlement policy" are described on page 668. Further reference to the subject may be found in previous Year Books.

The Closer Settlement Acts provide for compulsory resumption of alienated land for purposes of closer settlement when the value exceeds £20,000, exclusive of improvements. The Minister, with the sanction of the Governor and the approval of Parliament, may purchase private estates at a price approved by Parliament.\*

Land comprised in an improvement or scrub lease, or section 18 lease, may also be resumed or purchased under agreement for closer settlement upon the recommendation of the Closer Settlement Advisory Board.

Within six months after the passing of an Act sanctioning the construction of a line of railway, the Governor may notify a list of estates within 15 miles of a railway line; within six months of this notification the Governor may notify his intention to consider the advisableness of acquiring for purposes of closer settlement land so notified the property of one owner and exceeding £10,000 in value. The area of land under notification in September, 1923, was 2,869,221 acres.

At any time after a proclamation of intention to consider the advisableness of acquiring an estate, if an agreement be made that the land shall be subdivided for closer settlement by the owner, the power of resumption may be suspended for a term not exceeding two years. Any sale or lease made under such agreement, and any subsequent sale, lease or transfer made within five years of the original sale or lease, must be submitted to the Minister, and if it be found that the owner has failed to fulfil the conditions, the suspension of the power of resumption shall cease.

Activities under the Closer Settlement Acts as regards the acquisition by the Crown of privately-owned estates are now confined to promotion proposals.

#### *Closer Settlement Promotion.*

The provisions of the Closer Settlement Acts of 1918 and 1919, which replace the Closer Settlement Promotion Act, 1910 (repealed), enable three or more persons, or one or more discharged soldiers, each of whom is qualified to hold a settlement purchase, to negotiate with an owner of private lands, and under certain conditions to enter into agreements with him to purchase a specified area on a freehold basis, for a price to be set out in each agreement.

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\* Particulars of the values of alienated estates are shown on page 678.

Any one or more discharged soldiers or sailors may also enter into agreements to purchase on a present title basis from the holder—a conditional purchase; a conditional purchase lease; a conditional purchase and conditional lease, including an inconvertible conditional lease; a homestead selection; a homestead farm; a settlement lease; a Crown lease, or any part of one or more of such holdings; or an improvement or scrub lease, not substantially more than sufficient for the maintenance of a home.

Upon approval by the Minister, the vendor, in the case of private land, surrenders the area to the Crown, and the purchaser acquires it as a settlement purchase. In the case of land acquired on present title basis, the vendor transfers it to the purchaser. The vendor is paid by the Crown, either in cash or in Closer Settlement Debentures, and the freehold value of the land, inclusive of improvements thereon, purchased for any one person must not exceed £3,000, except in special cases where the improvements warrant it, when the freehold value may be up to £3,500: if the land is found suitable for grazing only, the freehold value may be up to £4,000.

Each farm is worked independently, the co-operation of the applicants ceasing with the allotment of an area. Each applicant has to pay a deposit of  $6\frac{1}{2}$  per cent. of the Crown valuation of the farm granted to him, except discharged soldiers or sailors, who are not required to pay any deposit. Repayments of the balance of the purchase money to the Crown are subject to the regulations in force at the date of commencement of title. At present the regulations provide for repayment at the rate of  $6\frac{1}{2}$  per cent. per annum of the capital value of the farm, where the purchase money is paid in cash; this includes interest at the rate of  $5\frac{1}{2}$  per cent. on the outstanding balance, the whole indebtedness being discharged in thirty-two years, where the initial deposit is paid. If the land is paid for by debentures, the deposit and annual instalments to be paid by applicants are  $1\frac{1}{2}$  per cent. in advance of the rate of interest paid by the Crown in connection with the debentures, and the interest to be paid on the unpaid balance of purchase money is  $\frac{1}{2}$  per cent. in advance of the rate of interest paid by the Crown as aforesaid.

Postponement of instalments and payment of interest only for a period may be sanctioned in special circumstances, and holders of farms may obtain advances from the Rural Bank Commissioners on account of improvements effected.

From the commencement of the Closer Settlement Promotion Act in September, 1910, till 30th June, 1922, promotion proposals were received in respect of 7,363 farms of a total area of 3,779,959 acres, the amount involved being £17,009,681, and many of these proposals were either withdrawn or refused. The total number of promotion proposals under the Closer Settlement Acts allotted and finally dealt with, for which payment had been made by the Government Savings Bank, and from the Closer Settlement Fund as at 30th June, 1922, were 3,605 farms representing 1,686,993 acres, valued at £7,940,390; of this number 1,149 farms embracing an area of 471,104 acres at a cost of £2,439,220, were paid for by the Government Savings Bank, and payment was made from the Closer Settlement Fund in respect of 2,456 farms of an area of 1,215,889 acres, value £5,501,160. Included in the foregoing are 45 farms which were subsequently forfeited and were vacant at 30th June, 1922.

The following table shows the operations under the promotion section of the Closer Settlement Acts during the twelve years ended 30th June, 1922 :—

Year ended 30th June.	Farms Allotted.		
	Number.	Area.	Amount Advanced.
		Acres.	£
1911	26	10,785	54,131
1912	209	84,279	418,941
1913	274	107,791	599,145
1914	183	62,598	361,351
1915	95	35,963	201,163
1916	157	68,219	331,037
1917	57	28,877	123,330
1918	154	71,942	351,011
1919	153	57,934	293,780
1920	572	209,857	1,121,339
1921	938	462,242	2,136,474
1922	787	486,506	1,948,688
Total...	3,605	1,686,993	7,940,390

In recent years all new operations have been under the promotion sections of the Act except in regard to settlement of returned soldiers.

*Value and Area of all Closer Settlement Lands.*

The following statement affords a summary of the Closer Settlement operations in respect of all lands acquired by the Government for Closer Settlement purposes to 30th June, 1922 :—

	Area Acquired.	Purchase Money.	Con- tingent Expenses.	Total Expendi- ture.	Number of Estates.	Number of Farms.
	acres.	£	£	£		
Closer Settlement Estates acquired under the Act of 1904 ... ..	745,792	2,715,534	133,042	2,848,576	32	1,681
Estates acquired under the Closer Settlement Acts for Group Soldier Settlement ... ..	330,235	1,602,232	12,336	1,614,568	25	726
Estates acquired under the Promotion Act of 1910 ... ..	471,104	2,439,230	...	2,439,230	199	1,149
Estates acquired under the Promotion sections of the Closer Settlement Acts ... ..	1,215,890	5,501,160	34	5,501,194	1,425	2,456
Total (Estates) ... ..	2,763,071	12,258,156	145,412	12,403,568	1,681	6,012
Improvement Leases, etc., acquired under the Closer Settlement Acts...	564,675	200,798	5,027	205,825	64	605
Total ... ..	3,327,746	12,458,954	150,439	12,609,393	1,745	6,617

The average area per new farm created was 503 acres, and the average cost to the Government per farm was £1,906.

In addition to the land acquired by the State for closer settlement a number of estates have been subdivided for that purpose by private owners.

The following table contains information regarding areas administered under the Closer Settlement Acts as at 30th June, 1922. Acquired improvement leases and estates acquired for group soldier settlement are excluded from account:—

Land Board District.	Land contained in Settlement Purchase Areas.			Price paid for Acquired Land.	
	Acquired Land.	Additional Crown Land.	Total.	Total.	Per Acre.
	acres.	acres.	acres.	£	£ s. d.
Estates acquired under Closer Settlement Act, 1904... ..	745,792	94,882	840,674	2,715,534	3 12 10
Estates acquired under the Promotion provisions of the Closer Settlement Acts... ..	1,215,889	...	1,215,889	5,501,160	4 10 6
Estates acquired under Closer Settlement Promotion Act of 1910—	471,104	...	471,104	2,439,230	5 3 7
Total ... ..	2,432,785	94,882	2,527,667	10,655,924	4 7 7

NOTE.—In addition to the above, 25 estates of an area of 330,285 acres, valued at £1,602,232 have been acquired and finally dealt with for Soldiers' Settlements, and one other estate had been acquired, but purchase had not been finalised.

Of the total area of lands shown above, 26,781 acres have been reserved for roads and other purposes, and 813,893 acres have been divided into 1,681 farms, the average area per farm being 484 acres.

Particulars of the subdivisions are shown in the following statement:—

Land Board District.	Farms.	Capital Value of Areas contained in Farms.			Farms allotted to 30th June, 1922.	Area allotted.	Capital value of Farms allotted.
		Acquired Lands.	Crown Lands.	Total.			
	No.	£	£	£	No.	acres.	£
Estates acquired under Closer Settlement Act, 1904... ..	1,681*	2,888,018	176,164	3,064,182	1,656	795,187	2,996,188
Estates acquired under the Promotion Provisions of the Closer Settlement Acts ... ..	2,456	5,501,160	..	5,501,160	2,456†	1,215,889	5,501,160
Estates acquired under Closer Settlement Promotion Act, 1910 ... ..	1,149	2,439,230	..	2,439,230	1,149‡	471,104	2,439,230
Total ... ..	5,286	10,828,408	176,164	11,004,572	5,261	2,482,180	10,936,573

\* Includes 22 farms of 17,857 acres (Forest Vale Estate), being utilised in connection with Government scheme of share-farming.

† Includes 36 farms which were subsequently forfeited and were vacant at 30th June, 1922.

‡ Includes 9 farms which were subsequently forfeited and were vacant at 30th June 1922.

Of the above number, 44 farms, with 24,265 acres and valued at £105,219, have been converted into homestead farms; one farm of 449 acres and value £2,497 having been reconverted from a homestead farm into a settlement purchase during the year, leaving 1,612 farms allotted under the Closer Settlement Act in existence at 30th June, 1922, the area of which is 770,922 acres and the capital value £2,890,964.

On the 30th June, 1922, there were 25 farms containing 18,706 acres unallotted; 22 of these of 17,857 acres are being utilised in connection with the Government scheme of share-farming, leaving 3 farms of 849 acres available for settlement.

The farms which have not yet been selected are let under permissive occupancy, and remain available for settlement purchase application.

The balances of purchase money in respect of the above farms under the Closer Settlement Acts, omitting group soldier settlements, as at 30th November, 1922, including deferred and postponed instalments and adjusting interest, amounted to £10,233,173. Arrears of instalments at the same date were £349,043.

#### SETTLEMENT OF RETURNED SOLDIERS.

Under the Returned Soldiers' Settlement Acts, special provision is made for the settlement of discharged soldiers on Crown lands, including the Murrumbidgee Irrigation Areas, and on lands acquired under the Closer Settlement Acts and otherwise.

Land is made available under one or other of the following tenures:—

1. Homestead Farm.—Lease in perpetuity.
2. Crown Lease.—Lease for 45 years.
3. Returned Soldiers' Special Holding.—Purchase or lease.
4. Suburban Holdings.—Lease in perpetuity.
5. Irrigation Farm.—Lease in perpetuity.
6. Group purchase.

Provision also exists in the Closer Settlement Acts under which one or more discharged soldiers may purchase privately owned land upon terms approved by the Minister for Lands, the Crown providing the whole of the purchase money. Transactions of this nature are permitted only in cases in which additional settlement is provided. The Minister has discretionary power to refuse any such proposal.

The maximum value of land and improvements which may be so purchased is £3,000; in special cases, however, this may be increased to £3,500 or £4,000 for purely grazing areas.

An advance not exceeding £625 may be made available for each soldier settler, but it must be used only for the general improvement of the land, purchase of implements, stock, seed, and other necessities, or in the erection of buildings.

Terms of repayment are usually as follows:—

House and other Permanent Improvements.—By payments over 25 years, interest only being charged during first five years.

Stock and Implements.—Six years, interest only being charged during first year.

Seeds, Plants, &c.—One year.

Interest as fixed under the Acts may not exceed  $3\frac{1}{2}$  per cent. for the first year and 4 per cent. for the second year, and it increases progressively by not more than  $\frac{1}{2}$  per cent. for each subsequent year, the maximum rate at present being  $6\frac{1}{2}$  per cent.

If the circumstances so warrant, sustenance may be obtained from the Department of Repatriation for a period not exceeding six months, the rates being:—

For a Single Man.—£1 per week inclusive of pension.

Married Man.—£1 10s. per week, plus 2s. 6d. for each child (up to 4) under 16 years of age (inclusive of pension).

Subject to such conditions as to security and terms of repayment as the Commission may think fit to impose, soldier settlers on the Murrumbidgee Irrigation Areas may obtain an advance, or have payment of rent and water rates suspended.

These advances will be made irrespective of the general advance of £625, which is made to all soldier settlers.

Details of the settlement of discharged soldiers on the land up to 30th June, 1922, under the special provisions noted, are shown below. It should be remembered, however, that many soldiers have taken up land upon areas not specially set apart for returned soldiers, and are not included herein:—

*Returned Soldiers—Special Holdings.*

During the year 1921–22 confirmation was made in respect of 31 holdings for 6,213 acres, and there were in existence at the 30th June, 1922, 297 holdings of 26,567 acres. In addition to the above, purchase had been completed and deeds issued in the case of 10 holdings of 43 acres: and approval to purchase granted, in respect of 28 holdings of 586 acres.

Homestead Farms.					Original Areas.		Additional Areas.
					No.	acres.	acres.
Confirmed, year ended 30th June, 1917	...	...	...	...	82	64,476	.....
" " " 1918	...	...	...	...	51	36,208	526
" " " 1919	...	...	...	...	164	275,011	3,413
" " " 1920	...	...	...	...	273	315,520	13,078
" " " 1921	...	...	...	...	194	244,393	2,273
" " " 1922	...	...	...	...	86	110,952	4,987
Total	...	...	...	...	850	1,046,560	24,277

Crown Leases.					Original Areas.		Additional Areas.
					No.	acres.	acres.
Confirmed to 30th June, 1917	...	...	...	...	40	99,885	.....
" year ended 30th June, 1918	...	...	...	...	21	66,197	.....
" " " 1919	...	...	...	...	36	82,943	10,311
" " " 1920	...	...	...	...	61	171,882	381
" " " 1921	...	...	...	...	29	70,440	1,606
" " " 1922	...	...	...	...	24	41,317	380
Total	...	...	...	...	211	533,664	12,678

Irrigation Farms.					Murrumbidgee.		Wentworth.		Total.	
					No.	acres.	No.	acres.	No.	acres.
Granted to 30th June, 1919	...	...	...	...	6	347	7	72	13	419
Year 1919–20	...	...	...	...	315	17,381	...	...	315	17,381
" 1920–21	...	...	...	...	130	6,232	...	...	130	6,232
" 1921–22	...	...	...	...	266	29,541	8	194	274	29,735
Total	...	...	...	...	717	53,501	15	266	732	53,767

The number of estates purchased by the Government for soldiers' settlement up to 30th June, 1922, was as follows:—

					No. of Estates.	Area.	Value.
						acres.	£
By direct purchase	...	...	...	...	38	266,917	466,387
Under Crown Lands Act	...	...	...	...	36	45,467	239,672
Closer Settlement Fund	...	...	...	...	26*	390,585	1,798,208
Total	...	...	...	...	100	702,969	2,504,267

\* Inclusive of one estate which had been acquired, but purchase not finalised at the end of the year.



The figures shown above under the head of Closer Settlement Fund relate only to estates subdivided as group settlements. Many more estates have been acquired for returned soldiers under the promotion sections of the Closer Settlement Act.

The number of returned soldiers who had been placed upon the land up to 30th June, 1922, in New South Wales through the agency of the State's machinery in connection with the repatriation scheme was 6,807, including 564 on private holdings who have received financial assistance under the provisions of the Returned Soldiers' Settlement Acts. This total does not include 224 applications approved but not finalised, nor the number who have either transferred or forfeited their holdings.

#### IRRIGATION AREAS.

The disposal of lands within these irrigation areas is regulated by the Crown Lands Consolidation Act, 1913, and the Irrigation Act, 1912. These areas are administered by the Water Conservation and Irrigation Commission. A special land board, with the powers and duties of a local land board, has been appointed in connection with certain provisions of the Crown Land Acts relating to lands within an irrigation area; the lands are classified as town, irrigable, and dry or non-irrigable lands. A person (except a married woman not separated from her husband by judicial decree) 16 years or over, if a male, or 18 years or over, if a female, or two or more such persons, may apply for an irrigation farm or block. An alien is not debarred, but he must become naturalised within three years under penalty of forfeiture. The title is perpetual lease, subject to perpetual payment of rent and performance of residence. The rent is at the rate of  $2\frac{1}{2}$  per cent. of the capital value—minimum for town land blocks, £1 per annum. At the expiration of five years after the granting of the application, a grant of the farm or block will be issued to the holder, provided that the required conditions have been observed. The holding may be protected against sale for debt in certain circumstances.

In respect of town land blocks, the conditions of residence are not imposed, and no person may hold more than three adjoining blocks for residence, or four adjoining blocks for business purposes.

On the 30th June, 1922, 1,781 farms were held, representing a total area of 108,240 acres and annual rental of £51,509. In addition, there were held 732 Town Land Blocks, comprising 175 acres, at a total rental of £6,493.

Irrigation settlements have been established also at Hay and at Curlwaa, near Wentworth. These were, in 1913, placed under the control of the Water Conservation and Irrigation Commission. The tenure under which farms are held in these two areas is leasehold, ranging from three to thirty years' duration, and the policy adopted has been to extend the tenures, subject to such conditions and reappraisement of rent as they may decide.

The Hay Irrigation Area consists of an area of 4,500 acres; and at 30th June, 1922, 3,737 acres, were occupied by seventy lessees at an annual rental of £678. The Curlwaa Area comprises 10,600 acres; and at 30th June, 1922, 120 farms of an area of 9,531 acres were under occupation, at a rental of £902.

The following table shows the number and area of farms on each of the irrigation areas at 30th June in each of the past five years :—

Year ended 30th June.	Murrumbidgee.				Hay.		Curlwaa.	
	Farms.		Town Blocks.		Farms.		Farms.	
	No.	acres.	No.	acres.	No.	acres.	No.	acres.
	No.	acres.	No.	acres.	No.	acres.	No.	acres.
1918 ... ..	796	34,703	147	41	72	3,015	85	8,410
1919 ... ..	804	36,807	176	50	76	3,027	78*	8,505
1920 ... ..	1,165	57,170	321	79	67*	3,724	92	8,532
1921 ... ..	1,361	75,974	543	136	69	3,737	106	8,393
1922 ... ..	1,781	108,240	732	175	70	3,737†	120	9,531†

\* Reduction in number of lessees is due to group settlers transferring to individuals.

† Balance of area not occupied as farms, comprises roads, channels, and other reserves, including permissive occupancy.

#### LAND RESUMPTIONS.

Land required by the State may be obtained by resumption, purchase, exchange, surrender, or gift. Resumptions are those made under the Public Works, Lands for Public Purposes Acquisition, and Local Government Acts and are treated by the Government Land Valuer, except those made for purposes of Public Instruction or Railways. Resumptions under the Commonwealth Lands Acquisition Act, 1906-16, Lands Acquisition (Defence) Act, 1918, and War Service Homes Act, 1918-20, are also included.

The following statement shows the area of such resumptions and purchases which were made during the past five years :—

Year.	Resumptions and Purchases.			Gifts.			Total.		
	a.	r.	p.	a.	r.	p.	a.	r.	p.
1918	3,774	0	33	17	0	32	3,791	1	25
1919	3,411	2	10	26	3	8	3,438	1	18
1920	27,840	1	22	17	2	2	27,857	3	24
1921	8,605	0	28	40	3	25	8,646	0	13
1922	6,582	1	35	9	3	17	6,592	1	12

Resumptions and purchases, and the purposes thereof, during 1921-22 were :—

	Area.				Area.		
	a.	r.	p.		a.	r.	p.
Commonwealth Offices...	0	1	31	Shire Quarry and Gravel Reserve ... ..	78	3	0
Defence ... ..	234	3	11·35	State Forests ... ..	960	0	0
Harbour Improvements...	9	3	8·25	Storm Water Channels and Drainage... ..	3	3	18·50
Housing ... ..	0	3	31·25	War Service Homes ... ..	29	3	4·65
Municipal Streets and Improvements...	7	0	14·25	Water Conservation and Irrigation ... ..	315	1	38
Police Stations ... ..	2	2	2	Water Storage and River Dam ... ..	5	2	13
Postal ... ..	1	0	22·70	Water Supply ... ..	471	2	27·50
Public Hospitals ... ..	0	3	26	Water Trusts ... ..	6	0	0
Public Parks ... ..	32	1	36·50				
Public School Sites ... ..	257	3	17·50				
Railways and Tramways	4,150	2	25·50				
Repatriation ... ..	0	1	24·75				
Sewerage ... ..	22	0	19				
				Total...	6,592	1	11·60

Land resumptions, purchases and gifts in quinquennial groups from the year 1900 inclusive, are as follow :—

Years.	Resumptions and Purchases.	Gifts.	Total.
	a. r. p.	a. r. p.	a. r. p.
1900-04	8,876 1 37	833 3 23	9,710 1 20
1905-09	105,848 3 8	439 1 27	106,288 0 35
1910-14	282,008 3 17	117 0 10	282,125 3 27
1915-19	64,194 0 35	81 0 35	64,275 1 30
1920	27,840 1 22	17 2 2	27,857 3 24
1921	8,605 0 28	40 3 25	8,646 0 13
1922	6,582 1 35	9 3 17	6,592 1 12

REVENUE FROM PUBLIC LANDS, 1918-22.

The following statement shows the revenue received from public lands during the years ended 30th June, 1918, to 1922, also the revenue per capita :—

Head of Revenue.	1917-18.	1918-19.	1919-20.	1920-21.	1921-22.
	£	£	£	£	£
Auction and Special Sales ...	65,593	81,475	73,365	58,595	43,550
Conditional Purchases ...	1,008,893	978,448	1,052,338	1,191,166	1,099,465
Pastoral Occupation ...	495,994	482,361	481,106	541,419	503,200
Mining Occupation ...	130,431	144,662	137,955	158,313	156,574
Miscellaneous Land Receipts ...	152,524	174,939	211,805	249,165	249,649
Gross Revenue ...	£ 1,853,435	1,861,885	1,956,569	2,198,653	2,052,438
Refunds ...	£ 25,462	33,473	41,130	47,193	43,618
Net Revenue ...	£ 1,827,973	1,828,407	1,915,439	2,151,465	2,008,820
REVENUE PER CAPITA.					
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Auction and Special Sales ...	0 0 8	0 0 10	0 0 9	0 0 7	0 0 5
Conditional Purchases ...	0 10 6	0 9 11	0 10 4	0 11 5	0 10 4
Pastoral Occupation ...	0 5 2	0 4 11	0 4 8	0 5 2	0 4 9
Mining Occupation ...	0 1 4	0 1 6	0 1 4	0 1 6	0 1 5
Miscellaneous Land Receipts ...	0 1 7	0 1 9	0 2 1	0 2 4	0 2 4
Gross Revenue ...	£ 0 19 3	0 18 11	0 19 2	1 1 0	0 19 3
Refunds ...	£ 0 0 3	0 0 4	0 0 5	0 0 5	0 0 5
Net Revenue ...	£ 0 19 0	0 18 7	0 18 9	1 0 7	0 18 10

*Dedication of Land.*

The area and the purposes for which land was dedicated during 1921-22 were as follows:—

Area.				Area.			
	a.	r.	p.		a.	r.	p.
Fire Brigade Station Sites ...	0	1	9	Public School Site ...	123	2	33
General Cemetery ..	8	0	6½	Racecourse ...	50	0	0
Literary Institute Sites ...	1	3	0	Sewerage ...	0	0	16½
Public High School ...	24	3	10	Town Hall Site ...	0	0	9
Public Recreation ...	35	0	3¾	Workmen's Institute ...	0	2	25½
Public Recreation and access...	0	0	6½				
Public Roads ...	80	3	35½	Total ...	325	1	35½

The foregoing areas are inclusive of various tenures within the Federal Capital Territory, aggregating approximately 173,451 acres, which will be subject to modification when the territorial boundaries shall have been surveyed.

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